

Implementation

Several hundred range-wide and watershed-specific recommendations for recovering coho salmon in California are listed in Chapter 7 (Range-wide Recommendations) and Chapter 8 (Watershed Recommendations). The majority of these recommendations were developed by the CRT. The Department further subdivided and refined some recommendations to facilitate successful implementation. The implementation schedules are intended to reflect the substance and intent of the recommendations. To successfully implement these recommendations, they must be both feasible and funded. Several elements necessary for implementation are described below. Implementation schedules for the range-wide and watershed recommendations follow.

The Recovery Strategy and implementation schedule must be capable of being carried out in a scientifically, technologically, and economically reasonable manner [FGC §2111(b)]. In addition, they must be carried out in a legal manner. Therefore, all of the processes and activities within this strategy are subject to these considerations.

9.1 AVAILABILITY OF FUNDS

Implementation of the Recovery Strategy by the Department is subject to the availability of adequate funding and staffing resources. It is also subject to the availability of adequate funds of other action entities and participants to support and implement recovery strategy actions.

9.2 WATERSHED PRIORITY

Each watershed in the coho salmon range was prioritized as described in Section 6.3 and Appendix G. The resulting rankings for restoration and management potential, as depicted in Figures 6-27 and 6-28, were assigned to each HSA in the implementation schedule.

9.3 TASK LEVEL

Each recovery recommendation is assigned a Task Level, denoting its relative importance or priority for implementation. There are three task levels:

- E Task Level E is the highest level. These tasks must be implemented rapidly or early in the coho salmon recovery process because they are critical to coho salmon recovery or they must precede tasks included in levels D and C.
- D Task Level D includes tasks that contribute directly to the stated recovery criteria or goals or must be implemented if recovery criteria or goals are to be achieved.
- C Tasks included in Task Level C contribute to stated recovery criteria or goals or will likely result in the delay of recovery if not implemented.

Task levels for recommendations were assigned by CDFG technical staff with watershed-specific expertise and with input from some CRT members. Task levels for SSPP recommendations were assigned by consensus of SSRT members based on specific knowledge of the Shasta Valley and Scott River watersheds.

9.4 TASK NUMBER

Recovery recommendations (Chapters 7 and 8) were, in many instances, refined and subdivided into multiple tasks by the Department to facilitate successful implementation. Hence, new numbers were assigned to tasks in the implementation schedules (Tables 9-1 and 9-2). Original recommendation numbers (or original identifiers) are also provided for reference.

9.5 ACTION ENTITIES

Action entities, including governments, organizations, and other parties that are either responsible for recovery actions or will be instrumental in recovery of coho salmon in California have been identified. They include, but are not limited to:

Federal agencies

- Bureau of Reclamation (USBR)
- National Marine Fisheries Service (NOAA Fisheries)
- National Park Service (NPS)
- United States Army Corps of Engineers (USACE)
- United States Fish and Wildlife Service (USFWS)
- United States Forest Service (USFS)

State agencies

- California Conservation Corps (CCC)
- California Department of Fish and Game (DFG)
- California Department of Forestry and Fire Protection (CDFA)
- California Department of Parks and Recreation (DPR)
- California Fish and Game Commission (FGC)
- California Geological Survey (CGS)
- Regional Water Quality Control Board (RWQCB)
- Resources Agency
- State Water Quality Control Board (SWQCB)
- California Department of Transportation (Caltrans)
- Board of Forestry and Fire Protection (BOF)

County governments

City governments

Resource Conservation Districts

Tribal governments

Private industry (including forestry, agriculture, livestock, mining)

Private landowners

Conservation organization

Watershed councils and groups

Academic institutions

9.6 ESTIMATED TIME

Some recovery actions are already occurring (ongoing), but most actions have yet to be initiated. Some of those actions can commence immediately or within the first five years of the strategy (interim), while others require other actions to occur before they, themselves, can be undertaken (long-term). Some actions will be immediate and temporary (short-term), while others will continue indefinitely and at constant intervals (continual).

9.7 IMPLEMENTATION SCHEDULES

The Department has organized the range-wide and watershed recommendations into schedules for implementation, which include the Department's identification of watershed priority, task level, action entity(ies), and estimated time. Table 9-1 sets forth the implementation schedule for range-wide recommendations. Table 9-2 (SONCC) and Table 9-3 (CCC) set forth the implementation schedules for the watershed recommendations.

TABLE 9-1: Implementation schedule for range-wide recommendations

IMPLEMENTATION	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
STREAMFLOW						
E	RW-SF-01	Design passive diversion devices for water diversions.	Potential Lead: CDFG	Interim	RW-I-B-01b	
C	RW-SF-02	Use passive diversion devices designed to allow diversion of water only when minimum flow requirements are met or exceeded.	Potential Lead: Landowners	Long-term	RW-I-B-01	
C	RW-SF-03	Plan water supply development and growth that are not harmful to coho salmon habitat.	Potential Lead: Department of Housing and Development, Counties and Cities, Water Districts, ABAG	Long-term	RW-I-C-01	
C	RW-SF-04	Increase agency coordination in planning water supply development and growth that are not harmful to coho salmon habitat.	Potential Lead: Department of Housing and Development, Counties and Cities, Water Districts, ABAG	Long-term	RW-I-C-01b	
C	RW-SF-05	Fund planning and education to accomplish water supply development and growth that is not harmful to coho salmon habitat.	Potential Lead: Department of Housing and Development, Counties and Cities, Water Districts, ABAG, CDFG, NOAA Fisheries	Long-term	RW-I-C-01c	
C	RW-SF-06	Educate public on unnecessary and wasteful use of water from coho salmon streams.	Potential Lead: SWRCB, RWQCBs, DWR, CDFG	Interim/Continual	RW-I-D-01	
C	RW-SF-07	Create interagency task force to improve coordination and promote consistency between agencies to avoid and minimize the adverse effects of future or reopened permits and licenses for water diversions on coho salmon.	Potential Lead: CDFG, SWRCB, RWQCB, NOAA Fisheries	Long-term	RW-I-D-02	
C	RW-SF-08	Encourage NOAA Fisheries and CDFG to work with SWRCB to validate and modify the guidelines (<i>Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams</i> , 2002) to be appropriate to the SONCC Coho ESU as needed.	Potential Lead: NOAA Fisheries, CDFG	Long-term	RW-I-D-02b	
C	RW-SF-09	Use programmatic, cost-efficient approaches and incentives to work with landowners to remove or convert direct diversions to off-channel storage ponds or tanks.	Potential Lead: CDFG, SWRCB, RWQCB, NOAA Fisheries, Landowners	Long-term	RW-I-D-03	
D	RW-SF-10	Restrict the season of diversion to December through March to provide sufficient flows for coho salmon while ensuring the permitted use need is met.	Potential Lead: SWRCB, RWQCB	Long-term	RW-I-D-03b	
E	RW-SF-11	Evaluate the rate, location, and volume of water drafting for dust control in streams or tributaries and where appropriate, minimize water withdrawals that could impact coho salmon.	Potential Lead: CDF, USFS, CDFG, Landowners	Long-term / Continual	RW-I-D-04	
D	RW-SF-12	When feasible, use alternatives to water as a dust palliative that are consistent with maintaining or improving water quality.	Potential Lead: Counties, Landowners	Long-term / Continual	RW-I-D-04b	
C	RW-SF-13	Improve implementation of the Lake or Stream Alteration Notification and Agreement process to protect coho salmon from the adverse affects of projects that would alter the bed, banks, channel, or natural flow streams.	Potential Lead: CDFG	Interim/Continual	RW-I-D-05	
E	RW-SF-14	Pursue funding for assessing, cataloging, and monitoring water diversions within the range of coho salmon.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Long-term	RW-I-D-06	

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
STREAMFLOW (continued)					
C	RW-SF-15	Assess, catalog, and monitor water diversions within the range of coho salmon. Can be readily quantified by watershed.	Potential Lead: RWQCBs Others: CDFG, Counties	Long-term	RW-I-D-06b
C	RW-SF-16	Upgrade the existing water rights information system so that water allocations can be readily quantified by watershed.	Potential Lead: SWRCB	Interim/ Continual	RW-I-D-06c
C	RW-SF-17	Provide conservation incentives to minimize negative effects on coho salmon of water drafting for roads and fire suppression, including, but not limited to:	Potential Lead: Counties, CDFG, USFS	Long-term / Continual	RW-I-D-07
	a. Streamline permitting for actions that result in an improvement of instream flows;				
	b. Support multiple uses of water storage systems; and				
	c. Cost-share funding where low-flow, trickle recharge water storage is used to avoid adversely affecting streamflow or coho salmon habitat.				
E	RW-SF-18	Establish a comprehensive streamflow evaluation program to determine instream flow needs for coho salmon in priority watersheds.	Potential Lead: CDFG	Long-term	RW-I-D-08
WATER RIGHTS					
E	RW-WR-01	Review authorized diversions that have no provisions to protect coho salmon in areas with high priority coho salmon habitat.	Potential Lead: SWRCB, RWQCBs	Interim/ Continual	RW-II-A-01
E	RW-WR-02	Identify unauthorized diversions.	Potential Lead: SWRCB, RWQCBs	Interim/ Continual	RW-II-A-02
C	RW-WR-03	Petition the SWRCB to add streams to the Declaration of Fully Appropriated Streams where flows are a limiting factor for coho salmon.	Potential Lead: CDFG	Interim	RW-II-A-04
E	RW-WR-04	Inventory water use and water availability in streams with coho salmon habitat.	Potential Lead: SWRCB, RWQCBs Other: CDFG	Long-term	RW-II-A-05
D	RW-WR-05	Ensure that water availability analyses on priority coho salmon habitat accurately reflect existing water use and availability.	Potential Lead: SWRCB, RWQCBs Other: CDFG	Long-term	RW-II-A-05b
E	RW-WR-06	Require streamflow-gauging devices on priority coho salmon streams when approving water development projects.	Potential Lead: Local Government, RWQCBs	Long-term	RW-II-A-05c
C	RW-WR-07	Continue to require riparian and pre-1914 water users to file annual statements of diversion and use.	Potential Lead: SWRCB	Interim/ Ongoing	RW-II-A-05d
D	RW-WR-08	For coho salmon recovery purposes, acquire or lease water, or acquire water rights from willing sellers.	Potential Lead: Wildlife Conservation Board	Interim/ Continual	RW-II-B-01
D	RW-WR-09	Develop incentives for water right holders to dedicate instream flows for the protection of coho salmon (Water Code §1707).	Potential Lead: CDFG, SWRCB	Long-term	RW-II-B-01b
C	RW-WR-10	For new riparian water rights created by subdivisions and rezonings, consider mitigation or conditions to protect coho salmon or avoid adverse effects where cumulative impacts on flows will be detrimental to coho salmon.	Potential Lead: Local Government Other: CDFG, NOAA Fisheries	Long-term	RW-II-B-02
E	RW-WR-11	Follow CDFG-NOAA Fisheries screening criteria when constructing, repairing, upgrading, reconstructing, and maintaining diversion screens within the range and distribution of coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Counties, Landowners	Interim/ Continual	RW-II-B-03

LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
FISH PASSAGE					
E	RW-FP-01	Continue and complete assessments and prioritizations for correction of fish passage barriers.	Potential Lead: CDFG, NOAA Fisheries, CCC	Interim/ Ongoing	RW-II-A-01
C	RW-FP-02	Continue to refine, update, and maintain the Coastal Conservancy database of barriers to fish passage.	Potential Lead: Coastal Conservancy, Fish Passage Forum, CDFG, Counties	Interim/ Ongoing	RW-II-A-02
E	RW-FP-03	Encourage funding authorities to provide adequate resources to construct new crossings and upgrade existing crossings (bridges, culverts and fills, other crossings) within the range of coho salmon to accommodate 100-year flows flood and associated bedload and debris. Priority for upgrading should be based upon the potential impact to coho salmon habitat.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Long-term	RW-II-C-01
C	RW-FP-04	Allocate adequate resources to prioritize and upgrade culverts within the range of coho salmon to pass 100-year flows and associated debris loads (e.g. LWD that might be mobilized).	Potential Lead: CDFG, NOAA Fisheries, CDF, USFS, Caltrans, RWQCBs, Counties	Long-term	RW-II-C-01b
C	RW-FP-05	Evaluate NOAA Fisheries standards for passage at summer dams, and if necessary, develop additional policies and guidelines for passage at summer dams. Implement any recommendations resulting from this process.	Potential Lead: NOAA Fisheries, CDFG	Interim	RW-II-C-02
C	RW-FP-06	Fund upgrades to flood-damaged fish passage facilities to meet the requirements of Department/NOAA Fisheries fish passage criteria, and CESA.	Potential Lead: FEMA Other: CDFG, NOAA Fisheries, Counties	Ongoing/ Continual	RW-II-C-04b
E	RW-FP-07	Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies for identifying, designing, and implementing fish passage projects. This includes, but is not limited to, funding for road maintenance programs and capital project activities.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Long-term / Continual	RW-II-C-06
D	RW-FP-08	Allocate adequate budgets to Federal, State, and local agencies for identifying, designing, and implementing fish passage projects.	Potential Lead: NOAA Fisheries, CDFG, DWR, SWRCB	Long-term	RW-II-C-06b
POLLUTANTS					
D	RW-PL-01	Improve water quality by reducing or minimizing point and non-point sources of nutrient input (e.g., sewage treatment plant discharge, septic system discharge, storm drain runoff, and agricultural runoff). Support efforts by cities and rural communities to complete system upgrades to achieve CWA compliance.	Potential Lead: SWRCB, RWQCBs	Interim/ Continual	RW-V-B-01
D	RW-PL-02	Within range of coho salmon, support efforts to complete system upgrades to cities and rural communities to achieve Clean Water Act compliance.	Potential Lead: Local Government Other: Federal and State Agencies	Long-term	RW-V-B-01b
C	RW-PL-03	Continue outreach, education, and enforcement related to hazardous materials spills, illegal dumping, and household hazardous waste dumping in creeks.	Potential Lead: SWRCB, CDFG	Interim/ Ongoing	RW-V-E-01
C	RW-PL-04	Continue to fund and support the CalTIP program.	Potential Lead: CDFG	Interim/ Ongoing	RW-V-E-03
C	RW-PL-05	Provide additional training for wardens to identify water pollution problems and promote coordination with other responsible agencies.	Potential Lead: CDFG	Interim/ Continual	RW-V-E-03b
C	RW-PL-06	Coordinate water rights training for resource agency personnel.	Potential Lead: Federal and State Agencies, SWRCB	Long-term / Continual	RW-V-E-03c

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SEDIMENTS					
E	RW-SD-01	Identify and prioritize specific sediment source locations for treatment that may deliver sediment to coho salmon streams.	Potential Lead: CGS	Long-term	RW-VI-A-02
C	RW-SD-02	Use protocols, such as the <i>California Stream Habitat Restoration Manual Guidelines</i> for upgrading areas of sediment delivery.	Potential Lead: CDFG, Landowners, Counties	Interim/Continual	RW-VI-A-02b
C	RW-SD-03	Educate and provide technical assistance to landowners to upgrade areas of sediment delivery.	Potential Lead: CDFG, CGS	Interim/Continual	RW-VI-A-02c
D	RW-SD-04	Restore natural drainage patterns and minimize hydrologic connectivity of roads, where feasible. Provide annual funding for restoring natural drainage patterns.	Potential Lead: USFS, BLM, NPS, DPR, Counties, Caltrans, Landowners	Long-term	RW-VI-B-01
D	RW-SD-05	Continue to fund and provide technical support to local government and private landowner actions to reduce identified sediment input from upslope sources. Basin-wide assessments should prioritize remediation activities, which would include slope stabilization and minimizing sediment production.	Potential Lead: CDFG, Counties, Watershed Groups	Interim/Ongoing	RW-VI-B-02
E	RW-SD-06	Prioritize basin-wide assessments for remediation activities, including slope stabilization and minimizing sediment production.	Potential Lead: CDF, CDFG, NOAA Fisheries, CGS	Interim	RW-VI-B-02b
D	RW-SD-07	Continue road and watershed assessments to identify and prioritize sources and risks of road-related sediment delivery to watercourses.	Potential Lead: Counties, Watershed Groups, Landowners, USFS	Interim/Ongoing	RW-VI-D-01b
D	RW-SD-08	Where sediment has been identified as impacting water quality and habitat condition, reduce road densities where necessary and appropriate.	Potential Lead: CDFG, Caltrans, Counties	Interim/Continual	RW-VI-D-01
D	RW-SD-09	Where sediment has been identified as impacting water quality and habitat condition, upgrade roads and road-maintenance practices to eliminate or reduce the potential for concentrating run-off to streams during rainfall events. Employ best available technology when appropriate.	Potential Lead: CDFG, Caltrans, Counties	Interim/Continual	RW-VI-D-01c
D	RW-SD-10	Where sediment has been identified as impacting water quality and habitat condition, decrease potential for streamflow to become diverted at road crossings during high flow events, resulting in flow along the road that returns to the channel at undesirable locations.	Potential Lead: CDFG, Caltrans, Counties	Interim/Continual	RW-VI-D-01d
D	RW-SD-11	Where sediment has been identified as impacting water quality and habitat condition, stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams.	Potential Lead: CDFG, Caltrans, Counties	Interim/Continual	RW-VI-D-01e
D	RW-SD-12	Where sediment has been identified as impacting water quality and habitat condition, minimize alteration of natural hill slope drainage patterns.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, Conservation Stakeholders	Interim/Continual	RW-VI-D-01f
D	RW-SD-13	Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies and private landowners for road maintenance activities.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, Conservation Stakeholders	Interim/Continual	RW-VI-D-01g

IMPLEMENTATION			TASK LEVEL NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
WATER TEMPERATURE							
E	RW-WT-01	Identify actions to maintain and restore water temperatures to meet habitat requirements for coho salmon in specific streams.	Potential Lead: CDFG, CDF, USFS, Academia, Counties, Landowners	Interim/Continual	RW-X-B-01		
D	RW-WT-02	Implement actions to maintain and restore water temperatures to meet habitat requirements for coho salmon in specific streams.	Potential Lead: Counties, Landowners, USFS CDFG, NOAA Fisheries, CDF	Long-term	RW-X-B-01b		
C	RW-WT-03	Provide funding and permit incentives to restore stream habitat where lack of LWD, riparian cover, simplified stream morphology and other conditions have been determined to be limiting factors to coho salmon habitat.	Potential Lead: CDFG, NOAA Fisheries, USFWS, USFS, Counties	Interim/Continual	RW-X-B-02		
LARGE WOODY DEBRIS							
E	RW-LW-01	Identify near stream vegetation communities that provide good opportunities for conifer LWD recruitment to coho salmon habitat. Address and identify possible solutions to potential conflicts between flood management activities and maintenance of riparian vegetation and LWD.	Potential Lead: CDF, USFS, DPR, NPS, CDFG, Watershed Groups, Landowners	Long-term	RW-XII/B-01a		
C	RW-LW-02	Provide education and information on the importance of these near stream coniferous communities to appropriate agencies, restoration funding groups, and landowners, and work to maintain them in a healthy condition.	Potential Lead: CDFG, NOAA Fisheries, USFS, Academia	Long-term	RW-XII/B-01a.ii		
E	RW-LW-03	Prioritize near stream vegetation communities for the purposes of restoring conifer LWD recruitment.	Potential Lead: CDF, USFS, DPR, NPS, CDFG, Watershed Groups, Landowners	Long-term / Continual	RW-XII/B-01b		
E	RW-LW-04	Prioritize near stream vegetation communities for the purposes of restoring conifer LWD recruitment.	Potential Lead: CDF, USFS, DPR, NPS, CDFG, Watershed Groups, Landowners	Long-term / Continual	RW-XII/B-01b		
E	RW-LW-05	Encourage funding authorities to provide funding and technical support for riparian restoration.	Potential Lead: Federal, Tribal, State, and Local Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Long-term / Continual	RW-XII/B-02		
D	RW-LW-06	Allocate funding and technical support for riparian restoration.	Potential Lead: CDFG, CDF, NOAA Fisheries, USFS, Watershed Groups	Long-term	RW-XII/B-02b		
D	RW-LW-07	Encourage management practices that promote conifer recruitment to provide short-term and long-term restoration of LWD and stream shade.	Potential Lead: CDFG, NOAA Fisheries Other: RCDs, Watershed Groups, CDF, USFS, Counties	Ongoing/Continual	None		
D	RW-LW-08	Encourage Federal, State, and county agencies and private landowners to protect instream LWD to the greatest extent practicable without endangering public safety, life or property.	Potential Lead: Counties, Landowners, USFS Other: CDFG, CDF, NOAA Fisheries	Interim/Continual	None		
STREAM COMPLEXITY							
C	RW-SC-01	Modify channel, flood control, and road maintenance manuals for consistency with habitat requirements and protection for coho salmon.	Potential Lead: Caltrans, USFS, Counties	Long-term	RW-XII/C-01		
D	RW-SC-02	Where appropriate and feasible, reconfigure levees and channelized streams to benefit coho salmon.	Potential Lead: USACE, Counties, Landowners, CDFG, NOAA Fisheries	Long-term / Continual	RW-XII/C-02		

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
ECOLOGICAL REFUGIA					
E	RW-ER-01	Identify and characterize coho salmon refugia.	Potential Lead: CDFG, NOAA Fisheries Other: USFS, Watershed Groups, Academia, Landowners	Long-term	RW-XV-A-01
D	RW-ER-02	Provide information to land managers, agencies, and landowners of the location and characteristics of coho salmon refugia.	Potential Lead: CDFG, NOAA Fisheries Others: USFS, Watershed Councils, Landowners	Long-term	RW-XV-A-02
E	RW-ER-03	Identify key coho salmon populations.	Potential Lead: CDFG, NOAA Fisheries Others: USFS, Landowners	Interim/ Continual	RW-XV-A-02b
D	RW-ER-04	Inform land managers, agencies, and landowners of locations of key coho salmon populations.	Potential Lead: CDFG, NOAA Fisheries	Interim/ Continual	RW-XV-A-02c
D	RW-ER-05	Implement measures to maintain key coho salmon populations.	Potential Lead: Landowners, USFS	Interim/ Continual	RW-XV-A-02c
D	RW-ER-06	Allocate substantial improvement efforts towards identified biological refugia, spawning coho salmon populations, suitable habitat accessible to coho salmon.	Potential Lead: All Local, State, Federal Agencies; Landowners	Long-term	RW-XV-B-01
HABITAT FRAGMENTATION					
D	RW-HF-01	Restore habitat connectivity between coho salmon populations in coastal and low-gradient inland streams.	Potential Lead: CDFG, Counties, Watershed Groups	Interim/ Continual	RW-XVI-B-01
D	RW-HF-02	Within prioritized watersheds, reduce habitat fragmentation by restoring fish passage to high quality habitat.	Potential Lead: CDFG, Counties, Watershed Groups	Interim/ Ongoing	RW-XVI-B-02
COMPETITION					
C	RW-CM-01	Develop a rapid-response eradication plan for invasive, non-native fish species that negatively affect coho salmon.	Potential Lead: CDFG and NOAA Fisheries	Long-term	RW-XVII-A-01
C	RW-CM-02	Develop management guidelines to mitigate the impacts of non-native fish species on coho salmon.	Potential Lead: CDFG and NOAA Fisheries	Long-term	RW-XVII-A-02
D	RW-CM-03	Remove non-native fish species from stock ponds where these fish pose a threat to coho salmon.	Potential Lead: Landowners, Counties Other: CDFG, Watershed Groups, NOAA Fisheries	Interim/ Continual	RW-XVII-A-03
HATCHERY OPERATIONS, GENETICS, AND RELOCATION					
D	RW-HO-01	Maintain the local genetic diversity of coho salmon populations.	Potential Lead: NOAA Fisheries, CDFG, Academia Other: Landowners, Counties, USFS	Long-term/ Continual	RW-XXI-B-01
E	RW-HO-02	Adopt draft policies for recovery hatcheries (see Appendix G).	Potential Lead: CDFG, NOAA Fisheries Other: Counties	Interim	RW-XXI-B-04
E	RW-HO-03	Adopt draft guidelines for recovery hatcheries (see Appendix H).	Potential Lead: CDFG, NOAA Fisheries Other: Counties	Interim	RW-XXI-B-05

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
HATCHERY OPERATIONS, GENETICS, AND RELOCATION (continued)					
D	RW-HO-04	Implement guidelines for recovery hatcheries (see Appendix H)	Potential Lead: CDFG, NOAA Fisheries Other: Counties	Interim	RW-B-05b
C	RW-HO-05	Evaluate the desirability and feasibility of relocating stranded juvenile coho salmon to nearby underutilized high quality habitat.	Potential Lead: CDFG, NOAA Fisheries, Academia	Interim/ Ongoing	RW-II-C-03
C	RW-HO-06	Develop a policy for relocation of stranded juvenile coho salmon, especially for under-utilized, high quality habitat.	Potential Lead: CDFG, NOAA Fisheries, Academia	Long-term	RW-II-C-03b
RIPARIAN VEGETATION					
D	RW-RV-01	Where necessary to protect coho salmon habitat, protect riparian communities from livestock while providing off-stream watering	Potential Lead: Landowners, NOAA Fisheries, CDFG Other: USFS, Counties	Interim/ Continual	RW-XXII-A-02
C	RW-RV-02	Plant and release conifers or other appropriate native species, and control blackberries and other competitors, to restore short term and long term LWD and shade.	Potential Lead: CDFG, RCDs, NOAA Fisheries, USFS, Landowners, Counties, Other: Watershed Groups, CDF	Interim/ Continual	RW-XXII-A-04
C	RW-RV-03	Provide incentives to landowners, including technical support, to plant conifers and control competing plant species.	Potential Lead: CDFG, NOAA Fisheries, Landowners, USFS, Counties Other: RCDs, Watershed Groups, CDF	Long-term	RW-XXII-A-04b
E	RW-RV-04	Inventory and evaluate the adequacy of buffer zones around riparian and wetland habitat on public and private lands.	Potential Lead: CDFG, NOAA Fisheries, USFWS, USFS, USACE, Counties, Landowners	Interim/ Continual	RW-XXII-A-05
E	RW-RV-05	Develop initiatives, including funding, to improve stream buffers that have been determined to be inadequate to protect coho salmon habitat.	Potential Lead: Counties Other: CDFG, NOAA Fisheries	Long-term	RW-XXII-A-06
D	RW-RV-06	Implement initiatives, including funding where appropriate, to improve stream buffers that have been determined to be inadequate to protect coho salmon habitat.	Potential Lead: Counties Other: CDFG, NOAA Fisheries	Long-term	RW-XXII-A-06b
ESTUARIES					
E	RW-ES-01	Adopt a policy of restoring estuarine habitat and the associated wetlands to provide fully functioning habitat. The policy should address:	Potential Lead: CDFG, NOAA Fisheries Other: Counties, Coastal Commission, Academia, Landowners	Long-term	RW-XXII-E-01
		a. Restoration of historic estuarine areas; b. Maximizing available estuarine and tidal prism habitat; c. Free passage of all coho salmon life-stages to estuaries; d. Adequate instream cover and complexity; e. Eradication of exotic flora and fauna; f. Protection of habitat quality by providing suitable water quality and quantity input to estuaries; g. Protection/restoration of coho salmon prey habitat; and h. Minimizing artificial breaching and associated potential negative impacts.			
D	RW-ES-02	Restore estuarine and associated wetland ecosystems.	Potential Lead: CDFG, NOAA Fisheries Other: Counties, Coastal Commission, Academia, Landowners	Long-term	RW-XXII-E-01b

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
LAND USE					
D	RW-LU-01	Continue providing subvention funds to counties for Williamson Act contracts to help preserve a rural landscape.	Potential Lead: State Government	Interim/ Continual	RW-XXV-A-01
D	RW-LU-02	Where necessary, revise General Plans, Local Coastal Plans, and/or Community Development Plans to direct development away from riparian habitats on coho salmon streams or tributaries, include setbacks for development, restrictions on grading activities, and setbacks for septic system development.	Potential Lead: Counties, Coastal Commission Other: CDFG, NOAA Fisheries	Long-term	RW-XXV-B-03
D	RW-LU-03	Establish incentives and standards to protect riparian and wetland areas on private lands.	Potential Lead: Counties	Interim	RW-XXV-B-03b
C	RW-LU-04	Encourage continued economically sustainable management of forest and agricultural lands in the range of coho salmon to reduce the potential for conversion to residential or commercial development.	Potential Lead: CDF, CDFG, Counties	Long-term	RW-XXV-B-04
D	RW-LU-05	Evaluate the adequacy of riparian buffers and development setbacks where needed for protecting riparian and wetland habitat on county, city, and private lands adjacent to coho salmon streams.	Potential Lead: CDFG, Counties	Long-term	RW-XXV-B-05
E	RW-LU-06	Develop county, city, and landowner initiatives to expand inadequate stream buffers and protect riparian and wetland habitat for coho salmon recovery.	Potential Lead: Counties and cities, Landowners Other: CDFG, NOAA Fisheries	Interim	RW-XXV-B-07
D	RW-LU-07	Implement county, city, and landowner initiatives to expand inadequate stream buffers and protect riparian and wetland habitat for coho salmon recovery.	Potential Lead: Counties and cities, Landowners	Long-term	RW-XXV-B-07b
D	RW-LU-08	Acquire conservation easements or land in fee title from willing landowners to protect habitat essential to coho salmon.	Potential Lead: Wildlife Conservation Board Other: USFS, BLM, Counties, Land Conservancies	Long-term	RW-XXV-C-01
PUBLIC OUTREACH					
C	RW-PO-01	Develop and provide informative programs to Registered Professional Foresters, Licensed Timber Operators, and other natural resource professionals regarding coho salmon and their habitat.	Potential Lead: CDFG, CDF	Interim/ Continual	RW-XXVII-A-01
C	RW-PO-02	Establish a recognition program for periodically identifying the efforts of Watershed Groups and stakeholders that are helping to implement the coho salmon recovery strategy.	Potential Lead: FGC, CDFG	Long-term	RW-XXVII-A-03
C	RW-PO-03	Develop incentives for landowners who participate in activities that exceed legal requirements or timelines to protect and/or restore coho salmon habitat and watershed processes.	Potential Lead: CDFG, NOAA Fisheries, Watershed Groups, Local Governments	Long-term	RW-XXVII-B-01
D	RW-PO-04	Educate local governments on how to incorporate protection of coho salmon in flood management activities consistent with CDFG, RWQCB, NOAA Fisheries, and USACE requirements.	Potential Lead: Local Governments	Interim/ Continual	RW-XXVII-B-03
D	RW-PO-05	Provide information to staff of counties and incorporated areas about the importance and requirements to develop and implement performance standards in Stormwater Management Plans.	Potential Lead: SWRCB, RWQCBs Other: CDFG, NOAA Fisheries, Watershed Groups, Education Extension Programs	Interim/ Continual	RW-XXVII-B-04
D	RW-PO-06	Educate and train restoration specialists and watershed restoration groups on the coho salmon recovery strategy.	Potential Lead: CDFG, NOAA Fisheries, Education Extension Programs	Interim/ Continual	RW-XXVII-C-01

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
PUBLIC OUTREACH (continued)					
C	RW-PO-07	Provide educational materials, outreach and training for issues such as sport fishing (inadvertent incidental take), poaching (directed take) and habitat destruction (LWD removal, riparian destruction, illegal stream crossings, pollution, illegal water withdrawal, etc.).	Potential Lead: CDFG	Long-term	RW-XXXII-A-23
INTEGRATION WITH OTHER PLANS AND PROGRAMS					
D	RW-IN-01	Continue to support the Threatened and Impaired Watersheds rules.	Potential Lead: BOF	Interim/ Potentially Continual	RW-XXX-A-01
D	RW-IN-02	Amend Forest Practice Rules to require that Registered Professional Foresters certify in timber harvesting plans that they have followed the California Licensed Foresters Association <i>Guide to Determining the Need for Input From a Licensed Geologist During THP Preparation</i> .	Potential Lead: BOF	Long-term	RW-XXX-A-02
D	RW-IN-03	Use statistical analysis of land failure and sediment yield to strengthen protection in geologically unstable areas.	Potential Lead: CDF Other: CGS	Long-term	RW-XXX-A-03
C	RW-IN-04	Conduct implementation and effectiveness monitoring for Nonindustrial Timber Management Plans.	Potential Lead: CDF	Long-term	RW-XXX-A-04
C	RW-IN-05	As feasible, prepare and implement TMDL plans on a schedule that gives priority to priority coho salmon watersheds.	Potential Lead: SWRCB	Long-term	RW-XXX-B-01
C	RW-IN-06	Consider necessary coho salmon restoration projects within the sediment allocation of TMDL or watershed basin restoration plan implementation.	Potential Lead: RWQCBs, Counties, Landowners Other: SWRCB, CDFG, NOAA Fisheries	Long-term	RW-XXX-B-02
E	RW-IN-07	Ensure that TMDL standards provide protection for coho salmon.	Potential Lead: CDFG, SWRCB	Long-term	RW-XXX-B-05
C	RW-IN-08	Conduct outreach to State agencies and local governments to encourage their participation in the TMDL process to ensure the standards provide protection of coho salmon.	Potential Lead: SWRCB, RWQCBs	Long-term	RW-XXX-B-06
C	RW-IN-09	Implement Fire Safe Councils' recommendations promoting the reduction of fuel near residences to reduce human-caused fires spreading into the forest and causing harm to coho salmon habitat.	Potential Lead: CDF, State Fire Safe Council, local FSCs Other: CDFG, NOAA Fisheries, USFS	Interim/ Continual	RW-XXX-D-01
C	RW-IN-10	Develop a process to incorporate coho recovery considerations in fire reduction and fuel management strategies, including identification of drafting sites in advance of wildland fire incident response.	Potential Lead: CDF, USFS, BLM, USGS, CDFG, CFSC, local FSCs, Landowners	Long-term	RW-XXX-D-03
D	RW-IN-11	Establish fire regimes to promote watershed function and health and to reduce the risk and impact of extensive, high severity fire on coho salmon and habitat.	Potential Lead: California Fire Alliance, CFSC, Long-term Counties, Academia, USGS, Landowners	RW-XXX-D-04	
E	RW-IN-12	Identify areas within coho salmon range that are susceptible to extensive, high severity fires.	Potential Lead: CDF, USFS	Interim	RW-XXX-D-05
E	RW-IN-13	Identify state of perturbation (=disturbance regime) in watersheds within coho salmon range to determine potential, deleterious shifts from ecological functioning regimes.	Potential Lead: USFS, USGS	Long-term	RW-XXX-D-06

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
INTEGRATION WITH OTHER PLANS AND PROGRAMS (continued)					
D	RW-IN-14	Restore aquatic habitat structure and life history complexity of coho salmon populations in areas susceptible to extensive, high severity fires.	Potential Lead: USFS, CDFG, NOAA Fisheries, Landowners	Long-term	RW-XXX-D-07
D	RW-IN-15	Continue to implement FishNet 4C and Five County salmon restoration goals, including adopting and implementing Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004), training staff on guidelines, addressing fish passage and road sedimentation issues, developing riparian protections, promoting alternatives to conventional bank stabilization, and developing land-use policies beneficial to coho salmon.	Potential Lead: Counties	Interim/ Ongoing	RW-XXX-E-01
D	RW-IN-16	Incorporate the Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004) within incidental take authorizations.	Potential Lead: CDFG	Interim/ Continual	RW-XXX-E-02
D	RW-IN-17	Work with USACE to reduce the impacts to coho salmon of USACE projects.	Potential Lead: NOAA Fisheries	Interim	RW-XXX-F-01
C	RW-IN-18	After delisting is achieved, review the recovery strategy to determine how to continue implementation of appropriate elements of the recovery strategy.	Potential Lead: CDFG	Long-term	RW-XXX-J-01
D	RW-IN-19	Implement the Aquatic Conservation Strategy as outlined in the Northwest Forest Plan, and specific Standards and Guidelines identified in the Land and Resource Management Plan for each National Forest in the range of California coho salmon.	Potential Lead: USFS Other: USFWS, CDFG, CDF, NOAA Fisheries	Long-term	None
PERMITTING					
C	RW-PR-01	Develop regulatory assurance mechanisms to encourage land managers, local governments, and landowners to implement coho salmon habitat restoration and/or enhancement projects.	Potential Lead: Federal, State, and Local Governments	Long-term	RW-XXXI-A-01
C	RW-PR-02	Coordinate with the State Water Resources Control Board and appropriate Regional Water Quality Control Boards to implement water quality monitoring and streamline permitting of coho habitat enhancement and/or restoration projects.	Potential Lead: NOAA Fisheries, CDFG	Long-term	RW-XXXI-A-02
E	RW-PR-03	Identify ways to remove regulatory barriers (e.g., permitting and environmental review) to expedite activities that will contribute to the recovery of coho salmon. Examples of ideas to consider may be: (1) the creation of local permit assistance centers; (2) seeking categorical exemptions from CEQA; and (3) seeking a certified regulatory program under CEQA for certain activities.	Potential Lead: Federal, State, and Local Governments; Landowners	Interim	RW-XXXI-A-03
D	RW-PR-04	Remove regulatory barriers (e.g., permitting and environmental review) to expedite activities that will contribute to the recovery of coho salmon.	Potential Lead: Federal, State, and Local Governments	Long-term	RW-XXXI-A-03b
E	RW-PR-05	Encourage the Department, NOAA Fisheries, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers to coordinate and develop programmatic incidental take authorizations (e.g., 404 permits, Section 7 consultations, 4(d) rules) for activities that will contribute to the recovery of coho salmon, including but not limited to the Department's Fisheries Restoration Grants Program.	Potential Lead: USACE, CDFG, NOAA Fisheries, USFWS	Long-term	RW-XXXI-A-04
C	RW-PR-06	Obtain funding to pay for environmental review and permitting of voluntary projects that will contribute to the recovery of coho salmon.	Potential Lead: CDFG, FCC	Long-term	RW-XXXI-A-05

PERMITTING (continued)	TASK LEVEL NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
E RW-PR-07	Develop management memoranda of understanding under §2081(a) to participants as an incentive for voluntary activities that will contribute to the recovery of coho salmon.	Potential Lead: CDFG	Interim	RW-XXXI-A-06	
E RW-PR-08	Issue management memoranda of understanding under §2081(a) to participants as an incentive for voluntary activities that will contribute to the recovery of coho salmon.	Potential Lead: CDFG	Long-term	RW-XXXI-A-06b	
E RW-PR-09	Evaluate the merit of counties adopting ordinances to exempt restoration and/or enhancement projects from indemnification requirements in context of coho salmon recovery.	Potential Lead: Counties, CDFG, NOAA Fisheries	Interim	RW-XXXI-A-07	
C RW-PR-10	If found to be of merit, adopt ordinances to exempt restoration and/or enhancement projects from indemnification requirements in context of coho salmon recovery.	Potential Lead: Counties	Long-term	RW-XXXI-A-07b	
D RW-PR-11	Bring into line the timing of instream restoration with THP activities (that require similar §1600 agreements; this will allow for add an addition month at the beginning of the restoration season).	Potential Lead: CDFG	Interim	RW-XXXI-A-09	
D RW-PR-12	Amend grading ordinances to exempt habitat restoration and enhancement activities within certain categories.	Potential Lead: Counties, Caltrans Other: CDFG, NOAA Fisheries	Long-term	RW-XXXI-A-010	
C RW-PR-13	Support adequate staffing and funding for the CDFG restoration program to complete contracts in a timely manner.	Potential Lead: Congress, State Legislature, Governor	Long-term / Continual	RW-XXXI-A-11	
C RW-PR-14	Support the Small Restoration Projects Categorical Exemption.	Potential Lead: Resources Agency, CDFG	Interim	RW-XXXI-A-12	
C RW-PR-15	Establish a new categorical exemption under CEQA for fish passage barrier removal projects that meet Department and NOAA Fisheries natural stream simulation criteria.	Potential Lead: State Legislature, Resources Agency Other: CDFG, NOAA Fisheries	Long-term	RW-XXXI-A-13	
C RW-PR-16	Increase interagency coordination on environmental review, permitting, and implementation of programs when coho salmon and habitat can be affected.	Potential Lead: CDFG, NOAA Fisheries Other: Federal, State, and Local Agencies	Interim / Continual	RW-XXXI-B-02	
C RW-PR-17	Where mitigation for otherwise lawful activities would mitigate for authorized take of coho and contribute to recovery of coho salmon, streamline the incidental take permitting process by developing guidelines for allowable take and for the issuance of incidental take permits under §2081(b).	Potential Lead: CDFG	Long-term	RW-XXXI-B-06	
E RW-PR-18	Coordinate and make recommendations needed to implement provisions of FGC §1600.	Potential Lead: CDFG, SWRCB	Interim / Ongoing	RW-XXXI-B-07	
C RW-PR-19	Implement recommendations on provisions of the FGC §1600.	Potential Lead: CDFG	Long-term	RW-XXXI-B-07b	
E RW-PR-20	Identify actions to improve coordination between the agencies and others to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.	Potential Lead: CDFG, NOAA Fisheries, USGS	Interim	RW-XXXI-B-07c	
D RW-PR-21	Implement actions to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.	Potential Lead: CDFG, NOAA Fisheries, USGS, USFS, Counties, Landowners	Long-term	RW-XXXI-B-07d	

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED ORIGINAL DURATION	IDENTIFIER
PERMITTING (continued)					
D	RW-PR-22	Determine and monitor § 1600 compliance related to water diversions.	Potential Lead: CDFG, Counties, RCDs	Long-term	RW-XXXI-B-07f
C	RW-PR-23	Evaluate requests for on-stream dams on coho streams above coho migratory reaches for the effects on the natural hydrograph and the effects on the supply of spawning gravel for recruitment downstream.	Potential Lead: CDFG	Interim/ Continual	RW-XXXI-B-07g
C	RW-PR-24	Develop incidental take guidelines that state that those diversion screens that comply with the Department/NOAA Fisheries Screening Criteria should be assumed by the Department to not take coho salmon with respect to the screens.	Potential Lead: CDFG	Interim	RW-I-B-03
WATERSHED PLANNING					
D	RW-WP-01	Provide adequate funding to the agencies to coordinate and support preparation of comprehensive watershed assessments and restoration plans:	Potential Lead: CDFG, NOAA Fisheries, Counties, CDF, USFS, RCDs, Watershed Groups	Interim/ Ongoing	RW-XXXII-B-02
	a.	Include a professional fisheries scientist;			
	b.	Assess streamflow, water diversions, water quality, sediment sources, fish barriers, riparian corridors, instream habitat, estuarine habitat, and land use, as necessary; and,			
	c.	Identify and prioritize site-specific restoration to benefit coho salmon.			
E	RW-WP-02	Review existing, approved watershed management or restoration plans within the range of coho.	Potential Lead: Watershed Groups, CDFG, NOAA Fisheries	Interim/ Continual	RW-XXXII-B-03
D	RW-WP-03	Implement actions from watershed plans consistent with priority recommendations of the coho salmon recovery strategy.	Potential Lead: Landowners, Counties, Watershed Groups, USFS Other: CDFG, NOAA Fisheries	Long-term / Continual	RW-XXXII-B-03b
ENFORCEMENT OF EXISTING LAWS					
D	RW-EN-01	Restore impacted coho salmon habitat resulting from project construction without proper review and approvals.	Potential Lead: Coastal Commission, Landowners	Interim/ Continual	RW-XXX-C-01
C	RW-EN-02	Fully enforce existing laws, codes, regulations, and ordinances that address the protection of coho salmon and their habitat. Habitat includes but is not limited to water (quality and quantity), pools, riffles, instream LWD, riparian vegetation, and estuaries.	Potential Lead: CDFG, NOAA Fisheries, District Attorneys	Interim/ Ongoing	RW-XXXII-A-01
C	RW-EN-03	Provide adequate funding and positions for agencies with enforcement authority to enforce laws and codes relevant to coho salmon protection.	Potential Lead: CDFG, NOAA Fisheries, District Attorneys	Long-term / Ongoing	RW-XXXII-A-02
E	RW-EN-04	Review diversions and use of water in priority coho salmon streams to determine which permits and/or licenses need modification for the protection of coho salmon.	Potential Lead: SWRCB, RWQCBs Other: CDFG, NOAA Fisheries, Counties	Long-term / Continual	RW-XXXII-A-03
D	RW-EN-05	Where necessary, formally request that the terms of water rights permits/ licenses be modified for protection of coho salmon.	Potential Lead: SWRCB, RWQCBs Other: CDFG, NOAA Fisheries, Counties	Long-term / Continual	RW-XXXII-A-03b
D	RW-EN-06	Conduct field studies to evaluate impacts of water use on coho salmon.	Potential Lead: RWQCBs, CDFG, NOAA Fisheries Others: Watershed Groups, Counties, Landowners, Academia	Long-term / Continual	RW-XXXII-A-03c

LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	DURATION	ORIGINAL IDENTIFIER
ENFORCEMENT OF EXISTING LAWS (continued)					
C	RW-EN-07	Develop supportive evidence and formal hearings to consider proposed changes to water use or permits.	Potential Lead: SWRCB, RWQCBs Other: CDFG, NOAA Fisheries, Counties	Long-term / Continual	RW-XXXII-A-03d
C	RW-EN-08	Fund water permit and use review program.	Potential Lead: SWRCB	Long-term / Continual	RW-XXXII-A-03e
C	RW-EN-09	Coordinate enforcement efforts with local, State and Federal agencies with regulatory authority affecting coho salmon.	Potential Lead: SWRCB, RWQCBs, EPA, NOAA Fisheries, CDFG, USFWS	Interim / Continual	RW-XXXII-A-04
C	RW-EN-10	Make a high priority of efforts to prevent unauthorized diversion and use of water and water permit processing.	Potential Lead: CDFG, DWR, SWRCB, District Attorneys	Long-term	RW-XXXII-A-05
C	RW-EN-11	Adequately fund water diversion enforcement and permit programs.	Potential Lead: CDFG, DWR, SWRCB, Counties	Long-term	RW-XXXII-A-05b
C	RW-EN-12	Support continued funding for the California District Attorneys' Association's Environmental Circuit Prosecutors program and/or Environmental Project for applicable district attorney offices in the range of coho salmon.	Potential Lead: CDFG, CalEPA, Counties	Long-term	RW-XXXII-A-06
C	RW-EN-13	Dedicate fines from violations affecting coho salmon or coho salmon habitat to coho salmon recovery and restoration activities consistent with the Recovery Strategy, including but not limited to education and outreach. Emphasis should be placed on keeping fine money in watersheds where the violation occurred to address existing coho salmon restoration plans and projects. This recommendation applies to fines that are not otherwise mandated by law to be directed to other purposes.	Potential Lead: Counties	Long-term	RW-XXXII-A-07
C	RW-EN-14	Examine penalty schedules with regard to the impact of violations to coho salmon.	Potential Lead: CDFG, Counties, District Attorneys	Long-term	RW-XXXII-A-08
C	RW-EN-15	If necessary, adjust penalty schedules to reflect the impact that violations have on coho salmon, taking into account other penalties that may be enforced in association with the same activity.	Potential Lead: Counties	Long-term	RW-XXXII-A-08b
E	RW-EN-16	Develop an outreach/information and education program that targets agency personnel, judges, district attorneys, the Attorney General's Office, municipalities, and other affected or interested parties concerning the status of coho salmon and the value and importance of coho salmon resources and coho salmon recovery.	Potential Lead: CDFG, NOAA Fisheries, USFS Other: Academia	Long-term	RW-XXXII-A-10
C	RW-EN-17	Provide educational materials, outreach and training for issues such as sport fishing, poaching, and habitat destruction to counties, district attorneys, municipalities, and affected and interested parties.	Potential Lead: CDFG, NOAA Fisheries, USFS Other: Academia	Long-term	RW-XXXII-A-10b
C	RW-EN-18	Support existing and promote, if necessary, new neighborhood watch programs that discourage illegal dumping, poaching, and other illegal activities in streams and watersheds.	Potential Lead: CDFG, CalEPA, SWRQB, Counties Other: Landowners, Watershed Groups	Interim / Continual	RW-XXXII-A-11
C	RW-EN-19	Support funding for increased enforcement of existing laws against dumping of toxic substances.	Potential Lead: CDFG, CalEPA, SWRQB, Counties	Long-term / Continual	RW-XXXII-A-14

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
ENFORCEMENT OF EXISTING LAWS (continued)					
D	RW-EN-20	As staffing allows, review all applications for proposed projects that may impact coho salmon.	Potential Lead: CDFG, NOAA Fisheries, RWQCBs, Counties Other: USFWS, USFS, CDF, SWRCB, CalEPA, FEMA	Interim/ Continual	RW-XXXII-A-18
C	RW-EN-21	Establish environmental task force comprised of State, local, and Federal enforcement agencies that operate in the range of coho salmon.	Potential Lead: NOAA Fisheries, EPA, USFWS, CDFG, CalEPA, District Attorneys, CHP, CDF	Long-term	RW-XXXII-A-27
C	RW-EN-22	Increase funding for the Department's CalTIP program.	Potential Lead: CDFG, State Legislature	Long-term	RW-XXXII-A-28
C	RW-EN-23	Seek programmatic incidental take authority with respect to screen design and installation that conforms to Department/NOAA Fisheries screening criteria.	Potential Lead: Counties, Landowners, project proponents Other: CDFG, NOAA Fisheries	Long-term	RW-XXXII-A-29
D	RW-EN-24	Encourage Federal, State, and county agencies and private landowners to protect instream LWD to the greatest extent practicable without endangering public safety, life or property.	Potential Lead: Counties, Landowners, USFS Other: CDFG, CDF, NOAA Fisheries	Interim/ Continual	None
IMPLEMENTATION					
C	RW-IM-01	Provide funding and incentives for projects that exceed requirements of existing law or expedite timelines required by law.	Potential Lead: CDFG, NOAA Fisheries, USFS, USFWS, EPA, SWRCB	Long-term / Continual	RW-XXXIV-A-01
D	RW-IM-02	Support continued and increased funding for the California Conservation Corps to implement coho salmon restoration projects throughout the coho salmon range in California.	Potential Lead: CCC, CDFG	Interim/ Ongoing	RW-XXXIV-A-02
INSTREAM GRAVEL EXTRACTION					
C	RW-IG-01	Within known or historic coho salmon habitat, require permits for instream gravel extraction to include:	Potential Lead: Counties	Interim/ Ongoing	RW-XXXV-A-01
		a. A total yearly extraction volume proportionally based on the long-term mean average recruitment of gravel into the mining reach;			
		b. An extraction strategy that will promote species recovery by retaining sufficient gravel to preserve and restore the alluvial structure necessary for forming and maintaining critical physical habitat in, up- and downstream of the mined reach; and			
		c. A monitoring plan capable of demonstrating that the extraction strategy successfully promotes species recovery.			
ASSESSMENT, MONITORING, AND RESEARCH					
E	RW-AM-01	Support research necessary to understand crucial aspects and uncertainties regarding coho salmon ecology. Three important issues are:	Potential Lead: NOAA Fisheries, CDFG, USFS, Academia	Interim/ Continual	RW-XXIX-B-03
		a. Genetic relatedness and health;			
		b. Potential of local adaptive differences to environmental factors, specifically water temperature;			
		c. Biological refugia, including non-natal rearing areas.			

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
ASSESSMENT, MONITORING, AND RESEARCH (continued)					
E	RW-AM-02	Evaluate and prioritize coho salmon issues and questions in need of research.	Potential Lead: NOAA Fisheries, CDFG, Academia	Long-term	RW-XXIX-C-01
D	RW-AM-03	Develop and maintain data/information system for compiling, analyzing, and distributing information on the status and trend of coho salmon and the status of coho salmon recovery.	Potential Lead: CDFG Other: NOAA Fisheries, Academia, USFS, Landowners	Interim/ Ongoing	RW-XXIX-C-01a
C	RW-AM-04	Develop a data collection and sharing policy that:	Potential Lead: CDFG	Interim	RW-XXX-C-02
	a.	Requires permission of private landowners for access across private lands to collect data where such access is desired;			
	b.	Disclosure of data collected from private lands in a form or by a means that protects landowner privacy (i.e., disclosure of data at stream-reach level or other appropriate scale that protects landowner privacy, but also shows the relationship to the nearest tributary confluences);			
	c.	Disclosed data must be quality assured and quality controlled;			
	d.	Disclosure should include metadata files indicating who collected the data, and how and for what purposes the data were collected;			
	e.	If requested, disclosed data should be in electronic form if already exists in that form; and			
	f.	Data requests should be responded to in a timely manner, recognizing limitations of staff and budgets can affect processing requests.			
D	RW-AM-05	Use field-tested implementation, effectiveness, and validation monitoring protocols for coho salmon restoration activities.	Potential Lead: Landowners, CDFG, NOAA Fisheries, USFS, Counties	Interim/ Ongoing	RW-XXIX-E-01
E	RW-AM-06	Conduct key assessments to understand essential aspects of coho salmon populations and life-history, including:	Potential Lead: CDFG, NOAA Fisheries, Academia, Counties, Watershed Groups	Interim/ Continual	RW-XXIX-F-01
	a.	Relative abundance;			
	b.	Spawning sites/success;			
	c.	Estuary use;			
	d.	Barriers to juveniles;			
	e.	Over-wintering growth and survival; and			
	f.	Ocean condition effects on coho salmon populations.			
E	RW-AM-07	Develop and implement a strategic, long-term population assessment and monitoring program for coho salmon.	Potential Lead: NOAA Fisheries, CDFG	Interim/ Ongoing	RW-XXIX-G-01
C	RW-AM-08	Recommend to agencies and organizations that they assess and prioritize actions within a watershed prior to implementation of comprehensive restoration plans.	Potential Lead: Watershed Groups, Landowners, Counties	Interim/ Continual	RW-XXIX-G-02
C	RW-AM-09	Fund research, monitoring, and evaluation of the effectiveness of restoration.	Potential Lead: CDFG, NOAA Fisheries, USFWS, USFS, CDF, Academia	Interim/ Continual	RW-XXIX-H-01
C	RW-AM-10	Develop a comprehensive system to gather, evaluate and manage monitoring information associated with coho salmon recovery.	Potential Lead: CDFG, NOAA Fisheries, CDF, CGS, Landowners	Interim/ Ongoing	RW-XXIX-D-04

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TIMBER MANAGEMENT					
E	RW-TM-01	Appropriate adequate State and Federal financial, material, and personnel support for on-the-ground recovery actions, identified in the Recovery Strategy. Possible funding mechanisms include but are not limited to: a. Legislation specifically identifying funding for coho salmon recovery; b. Cost-share programs with private landowners, stakeholder groups and local governments; and c. Endowment and/or grant programs cooperatively with private sources.	Potential Lead: State Legislature, Congress Others: Member organizations of CRT and SSRT	Long-term / Continual	ALT-C-1-a
D	RW-TM-02	Provide adequate financial, material, and personnel support for on-the-ground recovery actions, identified in the Recovery Strategy.	Potential Lead: California and Federal Legislature Others: CDFG, CDF, SWRCB, Caltrans, NOAA Fisheries, USFS, USFWS	Long-term / Continual	ALT-C-1-b
C	RW-TM-03	Provide technical expertise to support cooperative recovery actions, including but not limited to: a. Technical advisors to assist in the development of restoration proposals; b. Technical expertise to assist in the implementation of recovery activities on-the-ground; and c. Technical expertise to assist in training and education on coho salmon restoration projects.	Potential Lead: CDFG, CDF, SWRCB, NOAA Fisheries Others: USFS, USFWS, Academic Institutions Tribes, RWQCB, Caltrans	Interim / Continual	ALT-C-2
E	RW-TM-04	Develop a program to design and implement coho recovery plans for individual CALWATER Planning Watersheds. The program should promote and enable cooperative working relationships between agencies, landowners and residents.	Potential Lead: CDFG, NOAA Fisheries Others: USFS, Tribes, Counties, Landowners, Academic Institutions	Interim	ALT-C-3
C	RW-TM-05	Implement a program to design and implement coho recovery plans for individual CALWATER Planning Watersheds.	Potential Lead: CDFG, NOAA Fisheries Others: FGC, Planning Watershed Recovery Teams	Long-term	ALT-C-3
E	RW-TM-06	Provide Federal and State funding to assist landowners in performing watershed analysis in a manner usable by the Department.	Potential Lead: CDFG, CDF, SWRCB, CGS, Caltrans, NOAA Fisheries, USFS, USFWS	Long-term	ALT-C-3-a
E	RW-TM-07	Conduct systematic watershed analyses at the watershed level to identify key limiting factors, their sources, and locations affecting coho salmon.	Potential Lead: Watershed Groups, Environmental Consulting Companies, Counties, Agency Teams, Landowners Other: CDFG, NOAA Fisheries	Long-term	ALT-C-3-b,c
D	RW-TM-08	Remedy the sources of key limiting factors.	Potential Lead: Watershed Groups, Environmental Consulting Companies, Counties, Agency Teams, Landowners Others: CDFG, NOAA Fisheries	Long-term	ALT-C-3-c
E	RW-TM-09	Identify restoration projects for watershed transportation systems, fish passage, slope stabilization measures, erosion control measures and drainage structures.	Potential Lead: Caltrans, CDFG, CDF, RWQCB, Counties, Watershed Groups, Landowners, NOAA Fisheries Other: Academic Institutions, Environmental Consulting Companies	Ongoing / Continual	ALT-C-3-d

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TIMBER MANAGEMENT (continued)					
D	RW-TM-10	Implement restoration projects for watershed transportation systems, fish passage, slope stabilization measures, erosion control measures and drainage structures.	Potential Lead: Caltrans, CDFG, CDF, Counties, Watershed Groups, Landowners Others: Environmental Consulting Companies	Ongoing/ Continual	ALT-C-3-d
E	RW-TM-11	Identify beneficial management practices to protect existing values.	Potential Lead: CDF, CDFG, USFS, Landowners Others: NOAA Fisheries, SWRCB, RWQCB, CGS	Interim	ALT-C-3-e
C	RW-TM-12	Implement beneficial management practices to protect existing values.	Potential Lead: CDF, CDFG, USFS, Landowners Others: NOAA Fisheries, SWRCB, RWQCB, CGS	Long-term	ALT-C-3-e
C	RW-TM-13	Monitor effectiveness of beneficial management practices in protecting existing values.	Potential Lead: CDF, CDFG, USFS, Landowners Others: NOAA Fisheries, SWRCB, RWQCB, CGS	Long-term	ALT-C-3-e
C	RW-TM-14	Where necessary revise beneficial management practices to improve protection of existing values.	Potential Lead: CDF, CDFG, USFS, Landowners Others: NOAA Fisheries, SWRCB, RWQCB, CGS	Long-term	ALT-C-3-e
C	RW-TM-15	Use CALWATER coho salmon recovery plans, and data that support them as principle reference documents, to avoid costs to landowners and/or project proponents associated with repetitive analysis and paperwork for each project.	Potential Lead: Counties, Landowners, CDFG, NOAA Fisheries Others: Affected Local, State, and Federal Agencies	Long-term	ALT-C-3-f
C	RW-TM-16	Develop an information repository system for individual Planning Watersheds that compiles and integrates existing information.	Potential Lead: CDFG	Long-term	ALT-C-4
C	RW-TM-17	Add new information as it becomes available to Planning Watershed information system.	Potential Lead: CDFG	Long-term	ALT-C-4
C	RW-TM-18	Ensure that the Planning Watershed information system provides adequate confidentiality for information specifically pertaining to private property.	Potential Lead: CDFG	Long-term	ALT-C-4E
E	RW-TM-19	Where appropriate and where costs to landowners are offset, develop Road Management Plans that contribute to the restoration of coho salmon habitat.	Potential Lead: Caltrans, CDF, Counties, Landowners, CDFG, NOAA Fisheries, USFS Others: Watershed Groups, Academic Institutions	Long-term	ALT-C-5-a
D	RW-TM-20	Where appropriate and where costs to landowners are offset, implement Road Management Plans that contribute to the restoration of coho salmon habitat.	Potential Lead: Landowners, Counties, USFS, Caltrans, CDF Others: CDFG, NOAA Fisheries	Interim	ALT-C-5-a
C	RW-TM-21	Where appropriate and where costs to landowners are offset, encourage the use of a licensed engineer to assist in the design and construction of watercourse crossings.	Potential Lead: Caltrans, Counties, CDF Others: CDFG, SWRCB, CGS, NOAA Fisheries, BOF	Interim/ Continual	ALT-C-5-b
C	RW-TM-22	Provide continuing education and training (classroom and field) to ensure watercourse crossings are appropriately designed, constructed and maintained.	Potential Lead: CDF, CDFG, NOAA Fisheries, Caltrans, DWR Others: Environmental Consulting Companies, Academic Institutions	Long-term	ALT-C-5-c
D	RW-TM-23	Conduct cooperative coho salmon habitat restoration projects that extend across ownerships to address habitat restoration efforts in a coordinated and cost effective manner.	Potential Lead: Counties, Watershed Groups Others: CDFG, NOAA Fisheries, USFS, Landowners	Ongoing/ Continual	ALT-C-5-d

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TIMBER MANAGEMENT (continued)					
E	RW-TM-24	Appropriate State funding to assist landowners to implement coordinated watershed riparian vegetation improvement programs, in the range of coho salmon, that:	Potential Lead: State Legislature Others: Member Organizations of CRT and SSRT	Interim	ALT-C-5-e
		a. Identify appropriate areas within the riparian zone where planting of riparian vegetation, including conifers, is likely to improve coho salmon habitat; and			
		b. Promote vegetation modification (e.g., thinning, removal of undesired competitive vegetation) to accelerate riparian vegetation recovery and enhancement in coho salmon habitat.			
C	RW-TM-25	Provide State funding to assist landowners in implementing coordinated watershed riparian vegetation improvement programs in the range of coho salmon.	Potential Lead: CDFG, CDF, SWRCB, Caltrans, Counties Others: Tribes, USFS, NOAA Fisheries	Long-term	ALT-C-5-e
E	RW-TM-26	Conduct long-term monitoring to evaluate the effectiveness of FPRs in maintaining and recovering coho salmon habitat.	Potential Lead: CDF, CDFG Others: SWRCB, CGS, NOAA Fisheries, USFS, Landowners	Long-term / Continual	ALT-C-6
E	RW-TM-27	Through the CDF Monitoring Study Group, develop a monitoring project to evaluate whether mitigation measures implemented by Registered Professional Foresters as part of THPs are effectively reducing the risk of mass soil movement associated with harvesting operations, including road and landing construction.	Potential Lead: BOF, CDF, CGS Others: CDFG, NOAA Fisheries, Landowners	Interim	ALT-C-7
E	RW-TM-28	Document voluntary efforts by forest landowners beneficial to coho salmon that:	Potential Lead: CDF, BOR Others: CDFG, CGS, SWRCB, NOAA Fisheries, Landowners	Interim	ALT-C-8
C	RW-TM-29	a. Exceed FPR requirements; and/or b. Are recommendations included in the Recovery Strategy.	Potential Lead: CDFG Others: Landowners	Long-term	ALT-C-9
E	RW-TM-30	Evaluate the effectiveness of voluntary efforts to recover coho salmon populations.	Potential Lead: CDFG Others: Landowners	Long-term	ALT-C-10
C	RW-TM-31	Consolidate existing resource assessments and monitoring data.	Potential Lead: CDFG Others: Landowners	Long-term	ALT-C-10
C	RW-TM-32	Analyze resource assessments and monitoring data.	Potential Lead: CDFG, CDF, Forestry Industry Others: SWRCB, CGS, NOAA Fisheries, USFS	Long-term	ALT-C-11
D	RW-TM-33	Provide a collaborative watercourse and roads assessment training and watershed academy.	Potential Lead: WCB Others: CDFG, Landowners, Counties, NOAA Fisheries, USFS	Long-term	ALT-C-12
C	RW-TM-34	Acquire conservation easements or land in fee title from willing landowners to protect coho salmon habitat.	Potential Lead: WCB Others: CDFG, Landowners, Counties, NOAA Fisheries, USFS	Interim / Continual	ALT-C-12
C	RW-TM-35	Seek additional funding for staff to improve the effectiveness of the Department's timberland conservation program.	Potential Lead: Resources Agency, CDFG, CDF Others: CRT Member Organizations	Long-term	ALT-C-13
C	RW-TM-36	Appropriate funding for staff to improve effectiveness of the Department timberland conservation program.	Potential Lead: CDFG Others: Resource Agency, CDFG	Long-term	ALT-C-13
C	RW-TM-36	To the extent staff is available, conduct full review of THPs and other timberland conservation activities associated with managing timberlands in the range of coho salmon.	Potential Lead: CDFG Others: Resources Agency	Ongoing / Continual	ALT-C-14

TASK LEVEL	TASK NUMBER	TASK DESCRIPTION TIMBER MANAGEMENT (continued)	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
C	RW-TM-37	To the extent staff is available, prepare coho salmon biological assessments as a Lead or Responsible agency under CEQA for timberland conservation activities, including preharvest inspection reports but not limited to the review of timber harvesting plans.	Potential Lead: CDFG Others: Counties, Landowners, CDF, CGS, SWRCB	Long-term	ALT-C-15
D	RW-TM-38	To the extent staff is available, monitor for five years or more, if necessary to develop an adequate sampling regime, the implementation of the FPRs to determine whether these rules are consistent with the long-term survival of coho salmon.	Potential Lead: CDFG, CDF, NOAA Fisheries, Landowners Others: Academic Institutions	Interim/ Continual	ALT-C-16
D	RW-TM-39	If FPRs are found to be inconsistent with the long-term viability of coho salmon, revise FPRs to ensure adequate protection for the long-term survival of coho salmon.	Potential Lead: BOF Others: CDF, CDFG, FGC, NOAA Fisheries, Landowners, Forest Industry, Academic Institutions	Long-term	ALT-C-17
E	RW-TM-40	Develop a "proof of concept" pilot program to test mathematical or scientific methods of cumulative effects analysis as was suggested in A Scientific Basis for the Prediction of Cumulative Watershed Effects (University of California Committee on Cumulative Watershed Effects, Report No. 46, June 2001 or the "Dune Report").	Potential Lead: CDFG, CDF, SWRCB, CGS, Academic Institutions	Long-term	ALT-B-19
C	RW-TM-41	Implement a "proof of concept" pilot program to test mathematical or scientific methods of cumulative effects analysis.	Potential Lead: CDFG	Long-term	ALT-B-19
C	RW-TM-42	Establish a THP procedure to document and evaluate the implementation and effectiveness of coho salmon mitigation measures prior to completion inspections.	Potential Lead: BOF, CDF Others: FGC, CDFG, SWRCB, CGS, Landowners	Long-term	ALT-B-20e

TABLE 9-2: Implementation schedule for the SONCC Coho ESU

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
ROGUE RIVER AND WINCHUCK RIVER HSAs						
Illinois River HSA						
4	E	RO-IR-01	Develop a long-term plan to promote retention of LWD.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, CCC, Landowners, USFS, County, Watershed Groups	Interim	RO-IR-01
4	D	RO-IR-02	Implement the long-term plan to promote retention of LWD.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, CCC, Landowners, USFS, County, Watershed Groups	Long-term	RO-IR-01b
4	E	RO-IR-03	Continue to control the input of sediment into the watershed.	Potential Lead: CDFG, NCRWQCB Others: CDF, Landowners, CCC, USFS, Watershed Groups, NOAA Fisheries, County	Interim/ Continual	RO-IR-02
4	D	RO-IR-04	Monitor impacts of suction dredge activities for deleterious effects on coho salmon, taking corrective measures when needed.	Potential Lead: CDFG, NCRWQCB Others: NOAA Fisheries	Interim/ Continual	RO-IR-03
4	E	RO-IR-05	Develop a cooperative management strategy with Oregon Department of Fish and Wildlife to improve habitat conditions for coho salmon.	Potential Lead: CDFG, NOAA Fisheries Others: Oregon Department of Fish and Wildlife	Interim	RO-IR-04
4	D	RO-IR-06	Implement the cooperative management strategy with Oregon Department of Fish and Wildlife.	Potential Lead: CDFG, NOAA Fisheries Others: Oregon Department of Fish and Wildlife	Long-term	RO-IR-04b
Winchuck River HSA						
5	E	WR-SF-01	Develop a short-term plan to increase LWD until natural recruitment can be restored.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, USFS, County, Watershed Groups	Interim	WR-SF-01
5	D	WR-SF-02	Implement the short-term plan to increase LWD.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, USFS, County, Watershed Groups	Interim/ Continual	WR-SF-01b
5	E	WR-SF-03	Develop a long-term plan to restore a mature coniferous riparian zone to South Fork Winchuck River.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, County, Watershed Groups	Interim	WR-SF-02

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Winchuck River HSA (continued)						
5	D	WR-SF-04	Implement the long-term plan to restore a mature coniferous riparian zone to South Fork Winchuck River.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, County, Watershed Groups	Long-term	WR-SF-02b
5	E	WR-SF-05	Assess sources of sediment and prioritize treatment areas.	Potential Lead: CDFG, NCRWQCB Others: CDF, CCC, NOAA Fisheries, Landowners, County, Watershed Groups	Interim/ Continual	WR-SF-03
5	D	WR-SF-06	Prioritize and treat sources of sediment.	Potential Lead: CDFG, NCRWQCB Others: CDF, CCC, NOAA Fisheries, Landowners, County, Watershed Groups	Long-term	WR-SF-03b
5	D	WR-SF-07	Develop a cooperative management strategy with Oregon Department of Fish and Wildlife to improve habitat conditions for coho salmon.	Potential Lead: CDFG, NOAA Fisheries	Interim	WR-SF-04
5	D	WR-SF-08	Implement a cooperative management strategy with Oregon Department of Fish and Wildlife to improve habitat conditions for coho salmon.	Potential Lead: CDFG, NOAA Fisheries	Interim	WR-SF-05
SMITH RIVER HU						
	D	SR-HU-01	Develop a program to control exotic vegetation which impedes access to and use of tributaries by coho salmon.	Potential Lead: USFS Others: NOAA Fisheries, CDFG, Private Landowners	Interim/ Continual	SR-HU-01
	D	SR-HU-02	Implement a program to control exotic vegetation which impedes access to and use of tributaries by coho salmon.	Potential Lead: USFS Others: NOAA Fisheries, CDFG, Private Landowners	Interim/ Continual	SR-HU-01b
	E	SR-HU-03	Assess and prioritize barriers and impediments to passage (including water diversions), especially those on smaller tributaries, including Cedar, Clarks, Morrison, Peacock, Sultan, and Little Mill creeks.	Potential Lead: USFS, DPR, RNSP Others: NOAA Fisheries, Caltrans, County, CDFG, CDF, Private Landowners	Interim/ Ongoing	SR-HU-02
	D	SR-HU-04	Treat barriers and impediments to passage (including water diversions), especially those on smaller tributaries, including Yontocket, Tillas, and Tyron sloughs.	Potential Lead: USFS Others: NOAA Fisheries, Caltrans, County, CDFG, CDF, Landowners	Interim/ Ongoing	SR-HU-02b
	E	SR-HU-05	Develop a plan to restore the effectiveness and use of off-channel areas, sloughs, and wetlands.	Potential Lead: CDFG Others: NOAA Fisheries, USACE, California Coastal Commission, DPR, County	Interim	SR-HU-03
	D	SR-HU-06	Implement the plan to restore the effectiveness and use of off-channel areas, sloughs, and wetlands.	Potential Lead: CDFG Others: NOAA Fisheries, USACE, California Coastal Commission, County	Interim/ Continual	SR-HU-03b
	C	SR-HU-07	Investigate the feasibility of restoring channelized reaches of streams to natural meander belts (e.g., Lower Rowdy Creek and Dominie Creek) that would allow recruitment of stored spawning gravel, re-establish scour pools, recruit woody debris from banks, and ultimately restore fluvial processes that maintain coho salmon habitat.	Potential Lead: CDFG Others: NOAA Fisheries, Landowners	Long-term	SR-HU-04

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SMITH RIVER HU (continued)						
C	SR-HU-08	Where feasible, restore channelized reaches back to more natural fluvial processes (e.g. meander belts that recruit stored spawning gravel, re-establish scour pools, recruit woody debris from banks).	Potential Lead: CDFG Others: NOAA Fisheries, Landowners	Long-term	SR-HU-04b	
D	SR-HU-09	Protect existing LWD recruitment potential through the retention of mature coniferous trees in the riparian zone.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, CDF, RNSP, DPR, Landowners	Interim/ Ongoing	SR-HU-05	
D	SR-HU-10	Establish adequate streamside buffer areas that are protected from vegetation removal.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, CDF, Landowners	Interim/ Ongoing	SR-HU-05b	
D	SR-HU-11	Increase the amount of in-channel LWD.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, CDF, Landowners	Interim/ Ongoing	SR-HU-05c	
D	SR-HU-12	Continue to review THPs with regard to potential impacts to coho salmon and their habitat.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, CDF, Landowners	Interim/ Ongoing	SR-HU-05d	
D	SR-HU-13	Continue riparian management projects with landowners.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, CDF, Landowners	Interim/ Ongoing	SR-HU-05e	
C	SR-HU-14	Assess the impacts of steelhead outplanting by the Rowdy Creek Hatchery.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	SR-HU-06	
C	SR-HU-15	If impacts of steelhead outplanting are found, adjust the outplanting of steelhead by the Rowdy Creek Hatchery to minimize any identified impacts to coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries	Interim/ Continual	SR-HU-06	
D	SR-HU-16	Treat legacy sources of sediment and minimization the input from new sediment sources.	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners, Counties	Interim/ Ongoing	SR-HU-07	
C	SR-HU-17	Support and work with the watershed coordinator to aid in implementing recommendations.	Potential Lead: CDFG Others: Watershed Coordinator	Interim/ Ongoing	SR-HU-08	
Mill Creek HSA						
4	E	SR-MC-01	Assess and prioritize sediment sources.	Potential Lead: DPR Others: NPS, NOAA Fisheries, CDFG, CDF	Interim/ Ongoing	SR-MC-01
4	D	SR-MC-02	Treat sediment sources.	Potential Lead: DPR Others: NPS, NOAA Fisheries, CDFG, CDF	Interim/ Ongoing	SR-MC-01b
4	E	SR-MC-03	Develop a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: DPR Others: NPS, NOAA Fisheries, CDFG, CDF	Interim/ Ongoing	SR-MC-02
4	D	SR-MC-04	Implement the short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: CDFG Others: NPS, NOAA Fisheries, CDF	Interim/ Ongoing	SR-MC-02b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Mill Creek HSA (continued)						
4	D	SR-MC-05	Develop a revegetation plan for the riparian zone which includes planting of coniferous species, along with the release of conifers from competitors, such as alders and blackberries.	Potential Lead: CDFG Others: NPS, NOAA Fisheries, CDF	Interim/ Ongoing	SR-MC-03
4	D	SR-MC-06	Implement the revegetation plan for the riparian zone.	Potential Lead: DFG Others: NPS, NOAA Fisheries, CDFG, CDF	Interim/ Ongoing	SR-MC-03b
Wilson Creek HSA						
5	E	SR-WC-01	Develop a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: Private Landowners Others: CDF, CDFG, NPS, NOAA Fisheries	Interim/ Continual	SR-WC-01
5	D	SR-WC-02	Implement a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: Private Landowners Others: CDF, CDFG, NPS, NOAA Fisheries	Interim	SR-WC-02
5	D	SR-WC-03	Increase connectivity of riparian habitat through fencing and planting.	Potential Lead: Private Landowners Others: CDF, CDFG, Caltrans	Interim	SR-WC-02b
5	D	SR-WC-04	Implement the plan to increase connectivity of riparian habitat through fencing and planting.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim	SR-WC-03
5	D	SR-WC-05	Assess and prioritize the sources of sediment.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim/ Ongoing	SR-WC-03
5	D	SR-WC-06	Treat the sources of sediment.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim/ Ongoing	SR-WC-03b
Smith River Plain HSA						
4	E	SR-PL-01	Assess and prioritize barriers to coho salmon passage.	Potential Lead: CDFG Others: NOAA Fisheries, Caltrans, County, Private Landowners	Interim/ Ongoing	SR-PL-01
4	D	SR-PL-02	Treat the barriers to coho salmon passage.	Potential Lead: CDFG Others: NOAA Fisheries, Caltrans, County, Private Landowners	Interim/ Ongoing	SR-PL-01b
4	D	SR-PL-03	Implement the plan developed at the HU-level that speaks to restoring the effectiveness and use of off-channel areas, sloughs, and wetlands; and specifically give immediate attention to Yontocket (partially State-owned), Tillas and Tryon sloughs.	Potential Lead: CDFG Others: NOAA Fisheries, USACE, California Coastal Commission, Department of Parks and Recreation, County	Interim	SR-HU-03
KLAMATH RIVER HU						
E	KR-HU-01	Facilitate development of a cooperative adaptive management plan in preparation for low-flow emergencies.	Potential Lead: CDFG, PacifiCorp Others: USBR, NOAA Fisheries, USFWS, DOI, Tribes, SWQCB, other stakeholders	Interim	KR-HU-01	
E	KR-HU-02	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage.	Potential Lead: CDFG Others: RWQCB, NOAA Fisheries, USFS, Yurok Tribe, CDF, Caltrans, Private Landowners	Interim	KR-HU-03	

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
KLAMATH RIVER HU (continued)						
C	KR-HU-03	Develop a plan (including a feasibility analysis) for coho salmon passage over and above Iron Gate and Copco dams to restore access to historic habitat.	Potential Lead: FERC, PacifiCorp Others: USFWS, USBR, NOAA Fisheries, CDFG	Interim	KR-HU-04	
C	KR-HU-04	Analyze the feasibility and appropriateness of site-specific FGC §2084 permits for sport fishing for hatchery coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	KR-HU-07	
E	KR-HU-05	Complete comprehensive flow study activities (e.g. Hardy Phase II) and use them to educate water managers on how to reduce impacts to coho salmon.	Potential Lead: BIA, USFWS Others: NOAA Fisheries, CDFG	Interim	KR-HU-08	
D	KR-HU-06	Implement the comprehensive flow study in a manner that will restore natural stream processes.	Potential Lead: USBR Others: USFWS, NOAA Fisheries, CDFG	Interim	KR-HU-08b	
E	KR-HU-07	Apply protective down-ramp rates at Iron Gate Dam to minimize stranding of coho salmon fry.	Potential Lead: CDFG, USBR, FERC, PacifiCorp Others: USFWS	Interim	KR-HU-09	
E	KR-HU-08	Improve water quality coming into the Klamath River mainstem from the Upper Klamath Basin through ongoing efforts.	Potential Lead: CDFG Others: USBR, USFWS, NOAA Fisheries	Interim/ Ongoing	KR-HU-10	
D	KR-HU-09	Perform cost/benefit analysis of full or partial Hydroelectric Project removal for the purposes of improving water quality, fish passage, and sediment transport.	Potential Lead: PacificCorp, FERC Others: USBR, USFWS, NOAA Fisheries, CDFG	Interim	KR-HU-11	
D	KR-HU-10	Manage the streams and uplands in key cold-water tributaries, to preserve their cold-water thermal regime.	Potential Lead: USFS Others: Tribes, NOAA Fisheries, USFWS, CDFG, Landowners, Counties, Watershed Groups	Interim/ Continual	KR-HU-13	
D	KR-HU-11	Investigate coho salmon non-natal rearing and refugia use in lower reaches of tributaries and mainstem confluences.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS	Interim	KR-HU-14	
D	KR-HU-12	Protect and enhance tributary reaches identified as providing refugia to juvenile coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS	Interim	KR-HU-14b	
E	KR-HU-13	Develop a plan to address water quality and quantity in Klamath River tributaries that exacerbate mainstem water quality problems.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Private Landowners	Interim/ Ongoing	KR-HU-15	
D	KR-HU-14	Implement the plan that addresses water quality and quantity in the Klamath River tributaries that exacerbate mainstem water quality problems.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Private Landowners	Interim/ Ongoing	KR-HU-15	
E	KR-HU-15	Assess hatchery operations in terms of coho salmon recovery in accordance with the policies and guidelines included in this document.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS, USBR	Interim	KR-HU-16	
E	KR-HU-16	Continue disease monitoring of juvenile salmon emigration in the Klamath River mainstem so that major disease outbreaks can be identified and their causes evaluated.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS	Interim/ Ongoing	KR-HU-17	
E	KR-HU-17	Conduct disease monitoring of migrating adult Chinook and coho salmon during fall migration.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS, USBR	Interim/ Continual	KR-HU-18	

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
KLAMATH RIVER HU (continued)						
	D	KR-HU-18	Conduct studies in and around the Klamath River Hydroelectric Project to see if the Project is contributing to habitat for the ceratomyxosis intermediate host.	Potential Lead: PacifiCorp Others: USBR, CDFG, NOAA Fisheries, USFWS	Interim	KR-HU-19
	C	KR-HU-19	Restore appropriate coarse sediment supply and transport near Iron Gate Dam. Means to achieve this could include full or partial removal of the Klamath Project, or gravel introduction such as is done below other major dams (e.g., Trinity Dam).	Potential Lead: FERC, PacifiCorp Others: USFWS, NOAA Fisheries, CDFG	Long-term	KR-HU-20
	E	KR-HU-20	Acquire additional water through conservation easements and purchases of water and water rights from willing sellers, where lack of flows is a limiting factors and dedicate these flows to instream coho salmon needs	Potential Lead: CDFG Others: USBR, NOAA Fisheries, USFWS	Long-term / Continual	KR-HU-22
	E	KR-HU-21	Acquire interim, emergency water through transfers of water and water rights from willing sellers, when necessary to meet critical instream coho salmon needs.	Potential Lead: CDFG Others: USBR, NOAA Fisheries, USFWS	Interim	KR-HU-22b
	D	KR-HU-22	Provide watermaster service for all diversions with partial funding provided by the State or Federal governments.	Potential Lead: DWR Others: SWRCB, CDFG, USBR	Interim/ Continual	KR-HU-24
	C	KR-HU-23	Promote public interest in the Klamath River Basin's coho salmon, their beneficial use and habitat requirements.	Potential Lead: CDFG Others: USFWS, RCDs, Watershed Groups	Interim/ Continual	KR-HU-25
Klamath Glen HSA						
5	E	KR-KG-01	Resume estuary investigations to better understand the estuary's role in the survival of Klamath Basin River coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, Yurok Tribe, Coastal Commission, NPS	Interim/ Ongoing	KR-KG-01
5	D	KR-KG-02	Develop a plan to restore off-channel estuarine, wetland, and slough habitat in the Klamath River estuary and adjoining lower tributary reaches that includes:	Potential Lead: CDFG Others: Yurok Tribe, Private Landowners	Interim	KR-KG-02
			a. Determining if key properties, conservation easements, or development rights need to be purchased and the work with willing landowners; and b. Determining the need and installation of livestock exclusion fencing to protect restored areas.			
5	D	KR-KG-03	Implement the plan to restore off-channel estuarine, wetland, and slough habitat in the Klamath River estuary and adjoining lower tributary reaches.	Potential Lead: CDFG Others: Yurok Tribe, Private Landowners	Interim	KR-KG-03
5	D	KR-KG-04	Develop a plan to maintain Blue Creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River. The plan should emphasize that:	Potential Lead: Yurok Tribe Others: Simpson, USFS, NOAA Fisheries, CDFG, USFWS	Interim/ Ongoing	KR-KG-03
			a. Sediments from upslope activities do not impact the refugia; b. Upslope stabilization and restoration activities continue, including road assessment and treatment; c. In-channel and riparian restoration efforts (target riparian retention efforts) continue; and d. Feral cattle are removed.			

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Klamath Glen HSA (continued)						
5	D	KR-KG-05	Implement the plan to maintain Blue creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River.	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-03b
5	D	KR-KG-06	Develop a plan to protect and restore Klamath River mainstem tributaries, even those that do not support populations of coho salmon but that provide cool water and which improve mainstem Klamath water quality particularly during warm summer months. Plan should emphasize the:	Potential Lead: Yurok Tribe Others: Simpson, USFS, NOAA Fisheries, RWQCB, Yurok Tribe, Hoopa Valley Tribe, USFWS	Interim/ Ongoing	KR-KG-04
			a. Protection and/or restoration of riparian habitat;			
			b. Stabilization of upslope areas to prevent sedimentation and aggradation of tributaries at their mouths;			
			c. Improvement of Federal land management activities to reduce impacts to riparian corridors and decrease sediment loads; and			
			d. Finalize and/or refine the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) that focuses on the tributaries to the Lower Klamath within the Klamath Glen HSA.			
5	D	KR-KG-07	Finalize and Implement the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) to protect and restore Klamath River mainstem tributaries.	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-04b
5	D	KR-KG-08	Reduce sediment input from upslope sources, including activities such as:	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-05
			a. Decommissioning skidtrails and unmaintained roads, where possible;			
			b. Upgrading roads and maintenance practices;			
			c. Stabilizing slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams, and			
			d. Minimizing alteration of natural hillslope drainage patterns.			
5	E	KR-KG-09	Review existing inventory and assessment of barriers (Gale 2003) and prioritize barriers impeding migration of adult and juvenile coho salmon throughout the Lower Klamath River tributaries.	Potential Lead: Yurok Tribe Others: Simpson, Del Norte County, Caltrans, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-06
5	D	KR-KG-10	Treat prioritized barriers impeding migration of adult and juvenile coho salmon throughout the Lower Klamath River tributaries.	Potential Lead: CDFG Others: County, Tribes, NOAA Fisheries, USFWS, Landowners, Caltrans	Interim/ Ongoing	KR-KG-06a
5	D	KR-KG-11	Investigate temporal and spatial magnitude of tributary deltas and seasonal subsurface flow reaches to determine impacts to juvenile and adult coho migration and to quantify seasonal loss of lower tributary habitat. Investigation should include assessment of long-term delta size trends, annual variation in coho salmon access periodicity by tributary, quantification of seasonal habitat loss and fish stranding, and the relation of delta and subsurface flow formation to upslope erosion, river and tributary flow, mainstem bedload deposition and other causative factors.	Potential Lead: Yurok Tribe Others: Simpson, CDFG, CCC	Long-term	KR-KG-06b
5	D	KR-KG-12	Conduct feasibility study to re-establish adult coho salmon passage above major barriers in lower Roaches and Tully creeks and the Middle and North Forks of Ah Pah Creek.	Potential Lead: CDFG, Yurok Tribe Others: Simpson, CCC, NOAA Fisheries	Interim	KR-KG-06c

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Klamath Glen HSA (continued)						
5	D	KR-KG-13	Treat sediment sources and improve riparian and instream habitat conditions to provide adequate and stable spawning and rearing areas for coho salmon.	Potential Lead: Yurok Tribe, Simpson, CCC Others: USFS, CDFG, SCC	Interim/ Ongoing	KR-KG-07
5	D	KR-KG-14	Develop a plan to restore in-channel and riparian habitat in tributaries to address:	Potential Lead: Yurok Tribe, CDFG Others: Landowners, CCC, CDF, SCC, NOAA Fisheries	Interim/ Continual	KR-KG-08
		a.	Revegetating riparian zones with native species (e.g., conifers) to stabilize stream banks and promote a long-term supply of LWD;			
		b.	Providing adequate protection from development, grazing, etc; and			
		c.	Relocating roads out of riparian areas when feasible.			
5	D	KR-KG-15	Implement the plan to restore in-channel and riparian habitat in tributaries.	Potential Lead: Yurok Tribe, Simpson, CCC Others: NOAA Fisheries, CDFG, CDF, SCC, Landowners	Interim/ Continual	KR-KG-08b
5	D	KR-KG-16	Develop a plan to provide suitable accumulations of woody cover in slow-velocity habitats for coho salmon winter rearing on a short-term basis by placing wood in needed areas until natural supplies become available.	Potential Lead: CDFG Others: Tribes, Landowners, USFS	Interim	KR-KG-09
5	D	KR-KG-17	Implement the plan to provide suitable accumulations of woody cover in slow-velocity habitats for coho salmon winter rearing on a short-term basis by placing wood in needed areas until natural supplies become available.	Potential Lead: CDFG Others: Tribes, Landowners, USFS	Interim	KR-KG-09b
5	C	KR-KG-18	Construct livestock exclusionary fencing and corresponding riparian restoration as necessary in Salt, lower High Prairie, lower Hunter and lower Terwer creeks. Provide funding and incentives to landowners and/or restoration groups where necessary to achieve this goal.	Potential Lead: CCC, Yurok Tribe Others: Landowners, CDFG	Interim	KR-KG-10a
5	C	KR-KG-19	Develop a plan to remove feral cattle from lower Blue and Bear creeks.	Potential Lead: Yurok Tribe Others: Simpson	Interim	KR-KG-10b
5	C	KR-KG-20	Implement the plan to remove feral cattle from lower Blue and Bear creeks.	Potential Lead: Landowners	Interim/ Continual	KR-KG-10b
5	D	KR-KG-21	Work with Humboldt County, NOAA Fisheries and existing and future gravel-mining operators to restrict gravel-mining operations to appropriate mainstem Klamath locations. Gravel mining should not be conducted within Lower Klamath tributary watersheds until a scientifically valid and peer-reviewed geomorphic analysis is conducted to determine existing channel stability, causes of excess aggradation, and identifies gravel mining as an appropriate restorative measure, as outlined in task RW-I-G-01.	Potential Lead: CDFG Others: County, NOAA Fisheries, existing and future gravel mining operators	Interim/ Continual	KR-KG-11a
5	C	KR-KG-22	Encourage cooperation between industrial timber land managers and tribes to restore coho salmon habitat Use the successful Tribal/Simpson Resource Company program as an example.	Potential Lead: CDFG Others: Tribes, Simpson Timber	Interim	KR-KG-12

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Klamath Glen HSA (continued)						
5	D	KR-KG-23	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: CDFG Others: USFS, NOAA Fisheries, Yurok Tribe, CDF, Landowners	Interim/ Ongoing	KR-KG-13
	a.	LWD placement;				
	b.	Management to promote conifer recruitment;				
	c.	Improvement of existing riparian zones through planting and release of conifers, and control of alders, blackberries, and other competitors; and				
	d.	Provide technical support as an incentive for landowners.				
5	D	KR-KG-24	Provide technical and financial support to implement riparian restoration throughout alluvial reaches in lower Blue, Terwer, Hunter and Salt creeks.	Potential Lead: CDFG Others: Landowners, CCC, Yurok Tribe	Interim/ Continual	KR-KG-14
5	C	KR-KG-25	Investigate straying and impacts of exotic fish (bass and bullhead) populations in an abandoned mill pond in lower Richardson Creek to coho salmon in the adjoining Klamath River estuary.	Potential Lead: CDFG Others: Yurok Tribe, RNSP, NOAA Fisheries	Interim/ Continual	KR-KG-15
5	C	KR-KG-26	Continue funding and technical support for the California Conservation Corps to continue their collaborative participation with the Yurok Tribe and Simpson Resource Company to implement watershed restoration throughout the lower Klamath River subbasin.	Potential Lead: CDFG Others: Yurok Tribe, Simpson Resource Company	Interim/ Ongoing	KR-KG-17
5	E	KR-KG-27	Support continued implementation of the Coho Salmon Regional Abundance Inventory throughout the lower Klamath River subbasin.	Potential Lead: CDFG	Interim/ Ongoing	KR-KG-18
5	C	KR-KG-28	Develop a plan to restore the historic flood plain on Hoppaw Creek, in cooperation with landowners and Caltrans.	Potential Lead: CDFG Others: Simpson, Yurok Tribe, Caltrans	Interim	KR-KG-19
5	C	KR-KG-29	Implement the plan to restore the historic flood plain on Hoppaw Creek.	Potential Lead: CDFG Others: Landowners, Caltrans	Interim	KR-KG-19b
Orleans HSA						
3	D	KR-OR-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon that provide cool water and which improve mainstem Klamath River water quality and which provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-OR-01
	a.	Include improved land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;				
	b.	Request SWRCB to review existing water appropriations for compliance;				
	c.	Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and				
	d.	Provide measures that reduce hydrologic connectivity between streams and roads where feasible.				
3	D	KR-OR-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, but which provide cool water and which improve mainstem Klamath River water quality and/or provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-OR-01b

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Orleans HSA						
3	D	KR-OR-03	Continue activities that maintain connectivity (flow) between mainstem habitat and tributary habitat in Slate and Red Cap creeks.	Potential Lead: USFS Others: NOAA Fisheries, CDFG	Interim/ Continual	KR-OR-02
3	C	KR-OR-04	Develop a plan to protect and enhance spawning and rearing habitats in Boise and Camp creeks.	Potential Lead: USFS	Interim	KR-OR-03
3	C	KR-OR-05	Implement the plan to protect and enhance spawning and rearing habitats in Boise and Camp creeks.	Potential Lead: USFS	Interim	KR-OR-03b
3	E	KR-OR-06	Develop a plan to protect and enhance Bluff and Red Cap creek watersheds, which are classified as Key Watersheds in the Northwest Forest Plan, and are refugia for coho salmon.	Potential Lead: USFS Others: NOAA Fisheries, CDFG	Interim/ Ongoing	KR-OR-04
3	D	KR-OR-07	Implement the plan to protect and enhance Bluff and Red Cap creek watersheds	Potential Lead: USFS Others: NOAA Fisheries, CDFG	Interim/ Ongoing	KR-OR-04b
3	C	KR-OR-08	Re-establish natural fire regimes consistent with the Northwest Forest Plan to reduce the risk and impact of large, severe fire on coho salmon.	Potential Lead: USFS, BLM Others: CDF, Landowners	Interim	KR-OR-05
3	C	KR-OR-09	Support efforts to provide livestock exclusion fencing where feasible and appropriate, while providing off-site watering.	Potential Lead: USFS Others: Landowners	Interim/ Ongoing	KR-OR-06
3	D	KR-OR-10	Reduce sediment input from upslope sources, including measures to:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-OR-07
		a.	Decommission skid trails and unmaintained roads where possible;			
		b.	Upgrade roads and maintenance practices;			
		c.	Stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams; and			
		d.	Minimize alteration of natural hillslope drainage patterns.			
Ukonom HSA						
3	D	KR-UK-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, but which provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UK-01
		a.	Include improved land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;			
		b.	Request that SWRCB review existing water appropriations for compliance;			
		c.	Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and			
		d.	Provide measures that reduce hydrologic connectivity between streams and roads where feasible.			
3	D	KR-UK-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, but which provide cool water, improve mainstem Klamath water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UK-01b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Ukonom HSA (continued)						
3	D	KR-UHK-03	Reduce sediment input from upslope sources, including measures to:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UHK-02
		a.	Decommission skid trails and unmaintained roads where possible;			
		b.	Upgrade roads and maintenance practices;			
		c.	Stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams; and			
		d.	Minimize alteration of natural hillslope drainage patterns.			
3	D	KR-UHK-04	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage.	Potential Lead: CDFG Others: Caltrans, USFS, Karuk Tribe, USFS	Interim	KR-UHK-03
3	D	KR-UHK-05	Implement the plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage.	Potential Lead: CDFG Others: Caltrans, USFS, Karuk Tribe, USFS	Interim/ Ongoing	KR-UHK-03b
3	D	KR-UHK-06	Implement highest priority barrier repairs as identified in the Caltrans, USFS, and the Karuk Tribe inventories, specifically the identified culverts on Highway 96 at Stanshaw, Sandy Bar, and Coon.	Potential Lead: CDFG Others: Caltrans, USFS, Karuk Tribe, USFS	Interim/ Ongoing	KR-UHK-3c
3	D	KR-UHK-07	Develop a plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems, including measures to:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UHK-04
		a.	Conduct riparian revegetation and stream-bank restoration;			
		b.	Where feasible, relocate roads out of riparian areas and off of unstable land features (e.g., active landslides, granitic terrain, toe zones, wet-seepy areas);			
		c.	Increase the number of conifers and deciduous trees, where appropriate, for more stable stream banks, stream shading, and eventual recruitment of LWD; and			
		d.	Revegetate flood plain areas using native species.			
3	D	KR-UHK-08	Implement the plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UHK-04b
3	D	KR-UHK-09	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UHK-05
		a.	LWD placement;			
		b.	Management to promote conifer recruitment;			
		c.	Planting conifers in riparian zones; and			
		d.	Release of conifers by controlling alders, blackberries, and other competitors.			
3	D	KR-UHK-10	Provide technical support as an incentive to landowners for ongoing efforts of restoring LWD and shade to the watershed.	Potential Lead: USFS Others: Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-UHK-05b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Ukonom HSA (continued)						
3	C	KR-UK-11	Re-establish natural fire regimes consistent with the Northwest Forest Plan to reduce the risk and impact of large, severe fire on coho salmon.	Potential Lead: USFS, BLM Others: CDF, Landowners	Interim/ Ongoing	KR-UK-06
3	C	KR-UK-12	Where necessary, provide riparian protection from livestock through exclusion fencing, while establishing off-site watering.	Potential Lead: RCDs Others: Landowners	Interim/ Continual	KR-UK-07
3	E	KR-UK-13	Install screens on diversions to Department-NOAA Fisheries standards and provide funding, or other incentives to landowners where necessary to achieve this goal.	Potential Lead: CDFG Others: DWR, NOAA Fisheries	Interim	KR-UK-08
3	E	KR-UK-14	Increase efficiency of water diversions and delivery systems.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-UK-09
3	D	KR-UK-15	Continue restoration and monitoring of Siskon Mine to prevent further degradation of the riparian resource.	Potential Lead: CGS Others: RWQCB, EPA	Interim/ Ongoing	KR-UK-10
3	D	KR-UK-16	Request SWRCB to investigate the legality of diversions and use of water on Stanshaw Creek.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-UK-11
Happy Camp HSA						
4	D	KR-HC-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath water River quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-HC-01
			a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;			
			b. Request that SWRCB review existing water appropriations for compliance;			
			c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and			
			d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible.			
4	D	KR-HC-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-HC-01b
4	D	KR-HC-03	Reduce sediment input from upslope sources, including measures to:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HC-02
			a. Decommission skid trails and unmaintained roads where possible;			
			b. Upgrade roads and maintenance practices;			
			c. Stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams; and			
			d. Minimize alteration of natural hillslope drainage patterns.			

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Happy Camp HSA (continued)						
4	E	KR-HC-04	Develop a plan to improve coho salmon passage at stream and road crossings, including measures to:	Potential Lead: CDFG Others: USFS, Caltrans, Karuk Tribe, Counties	Interim	KR-HC-03
			a. Replace culverts on both USFS and Caltrans roads with structures allowing fish passage (USFS and Karuk Tribe have identified culverts under Highway 96 at Cade, Portuguese, and Fort Goff creeks as needing treatment);			
			b. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and			
			c. Establish an adequate funding source basin-wide for road maintenance and upgrades (possible funding sources are USFS, County and State agencies).			
4	D	KC-HC-05	Implement the plan to improve coho salmon passage at stream and road crossings.	Potential Lead: CDFG Others: USFS, Caltrans, Karuk Tribe, Counties	Long-term	KC-HC-03b
4	D	KR-HC-06	Develop a plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems, including measures to:	Potential Lead: CDFG Others: USFS, Tribes, Landowners	Interim	KR-HC-04
			a. Conduct riparian revegetation and stream-bank restoration;			
			b. If feasible, relocate roads out of riparian areas and off of unstable land features (e.g., active landslides, granitic terrain, toe zones, wet-sleepy areas);			
			c. Increase the number of conifers and deciduous trees, where appropriate, for more stable stream banks, stream shading, and eventual recruitment of LWD; and			
			d. Revegetate flood plain areas using native species.			
4	D	KR-HC-07	Implement the plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems.	Potential Lead: CDFG Others: USFS, Tribes, Landowners	Interim/ Continual	KR-HC-04b
4	D	KR-HC-08	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HC-05
			a. LWD placement;			
			b. Management to promote conifer recruitment;			
			c. Planting conifers in riparian zones; and			
			d. Release of conifers by controlling alders, blackberries, and other competitors.			
4	C	KR-HC-09	Re-establish natural fire regimes consistent with the Northwest Forest Plan to reduce the risk and impact of large, severe fires on coho salmon.	Potential Lead: USFS, BLM Others: CDF, Landowners	Interim	KR-HC-06
4	C	KR-HC-10	Where necessary, provide riparian protection from livestock through exclusion fencing, while establishing off-site watering.	Potential Lead: USFS Others: Landowners	Interim	KR-HC-07

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Happy Camp HSA (continued)						
4	E	KR-HC-11	Install screens on diversions to Department-NOAA Fisheries standards and provide funding, or other incentives to landowners where necessary to achieve this goal.	Potential Lead: CDFG Others: NOAA Fisheries, Landowners	Interim	KR-HC-08
4	E	KR-HC-12	Increase efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet this goal.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-HC-09
4	D	KR-HC-13	Request the NCRWQCB to continue monitoring Grey Eagle Mine and tailings as a follow-up to remediation that has already been done.	Potential Lead: CDFG Others: RWQCB	Interim	KR-HC-10
	D	KR-HC-14	Request that EPA Region 9 consider coho salmon when dealing with both emergency and remedial actions.	Potential Lead: CDFG Others: EPA	Interim	KR-HC-10b
Seiad Valley HSA						
4	D	KR-SV-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-SV-01
		a.	Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;			
		b.	Request that the SWRCB review existing water appropriations for compliance;			
		c.	Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and			
		d.	Provide measures that reduce hydrologic connectivity between streams and roads where feasible.			
4	D	KR-SV-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for fish, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-SV-01b4
4	D	KR-SV-03	Reduce sediment input from upslope sources by:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-SV-02E
		a.	Decommissioning unmaintained roads (where possible) and skid trails;			
		b.	Upgrade roads and maintenance practices;			
		c.	Stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams; and			
		d.	Minimize alteration of natural hill slope drainage patterns.			

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Seiad Valley HSA (continued)						
4	E	KR-SV-04	Improve fish passage at stream and road crossings, including measures to:	Potential Lead: CDFG Others: USFS, Caltrans	Interim/ Ongoing	KR-SV-03
		a. Replace culverts on both USFS and Caltrans roads with structures allowing coho salmon passage;				
		b. Treat coho salmon passage problems associated with the USFS roads;				
		c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and				
		d. Establish an adequate funding source basin-wide for road maintenance and upgrades (possible funding sources are USFS, County and State agencies).				
4	D	KR-SV-05	Develop a plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems, including measures to:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-SV-04
		a. Conduct riparian revegetation and stream-bank restoration;				
		b. Relocate roads out of riparian areas and off of unstable land features (e.g., active landslides, granitic terrain, toe zones, steep areas);				
		c. Increase the number of conifers and deciduous trees, where appropriate, for more stable stream banks, stream shading, and eventual recruitment of LWD; and				
		d. Revegetate flood plain areas using native species.				
4	D	KR-SV-06	Implement the plan to ensure continued yields of high quality water by the maintenance and ecological function of tributary riparian systems	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-SV-04b
4	D	KR-SV-07	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-SV-05
		a. LWD placement;				
		b. Management to promote conifer recruitment;				
		c. Planting conifers in riparian zones; and				
		d. Release of conifers by controlling alders, blackberries, and other competitors.				
4	D	KR-SV-08	Provide technical support as an incentive to landowners for ongoing efforts of restoring LWD and shade to the watershed.	Potential Lead: USFS, NOAA Fisheries, CDFG Others: CDF, Landowners	Interim	KR-SV-05b
4	C	KR-SV-09	Manage roadless areas to be consistent with land use allocations under the Northwest Forest Plan to reduce the risk of large, severe fires by re-establishing the natural fire regimes.	Potential Lead: USFS	Interim	KR-SV-06
4	C	KR-SV-10	Where necessary, provide riparian protection from livestock through exclusion fencing, while establishing off-site watering.	Potential Lead: USFS Others: Landowners	Interim	KR-SV-07
4	E	KR-SV-11	Install screens on diversions to Department-NOAA Fisheries standards and provide funding, or other incentives to landowners where necessary to achieve this goal.	Potential Lead: CDFG Others: NOAA Fisheries, Landowners	Interim	KR-SV-08

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Seiad Valley HSA (continued)						
4	E	KR-SV-12	Study the likely benefits to instream flow of increasing the efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet actions that are given a high priority.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-SV-09
4	E	KR-SV-13	Identify illegal water diverters and request that the SWRCB take appropriate action.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-SV-10
4	E	KR-SV-14	Request that the SWRCB review and/or modify water use based on the needs of coho salmon and authorized diverters.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-SV-10b
4	D	KR-SV-15	Look for opportunities to acquire water rights for instream flow from willing participants who possess valid water rights.	Potential Lead: CDFG Others: Landowners, RCDs	Interim	KR-SV-11
4	D	KR-SV-16	Assess potential coho salmon passage problem associated with private water diversion at the mouth of Middle Creek (tributary to Horse Creek).	Potential Lead: CDFG Others: Landowners	Interim	KR-SV-12
4	D	KR-SV-17	If necessary, design and implement a remediation project for coho salmon fish passage at the mouth of Middle Creek.	Potential Lead: CDFG Others: Landowners	Interim	KR-SV-12b
Beaver Creek HSA						
4	C	KR-BC-01	Re-establish natural fire regimes consistent with the Northwest Forest Plan to reduce the risk and impact of a large, severe fire on coho salmon.	Potential Lead: USFS Others: BLM, CDF	Long-term	KR-BC-01
4	C	KR-BC-02	Encourage landowners to manage fuels to prevent large, severe fires and to evaluate the application of the Watershed Evaluation Mitigation Addendum.	Potential Lead: USFS Others: CDF, County, Landowners, CDFG	Interim/ Ongoing	KR-BC-02
4	D	KR-BC-03	Assess fine sediment production and delivery from the USFS road adjacent to the West Fork of Beaver Creek.	Potential Lead: USFS	Interim	KR-BC-03
4	D	KR-BC-04	Implement appropriate remediation for the sediment from the USFS road adjacent to the West Fork of Beaver Creek.	Potential Lead: USFS	Interim	KR-BC-03b
4	C	KR-BC-05	Hydrologically disconnect the USFS Beaver Creek Road north of West Beaver Creek.	Potential Lead: USFS	Interim	KR-BC-04
4	D	KR-BC-06	Support actions to reduce sediment from upslope sources such as: a. Decommission roads and skid trails; b. Upgrade roads and maintenance practices; c. Ensure adequate coho salmon migration is provided for at stream/road crossings; d. Stabilize slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams; e. Minimize alteration of natural hillslope drainage patterns; and f. Encourage the relocation of roads out of riparian areas and off of unstable land features (e.g., active landslides, granitic terrain, toe zones, seep areas).	Potential Lead: USFS, NOAA Fisheries Others: CDFG, CDF, Landowners	Interim/ Ongoing	KR-BC-05

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Beaver Creek HSA (continued)						
4	D	KR-BC-07	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should: <ul style="list-style-type: none"> a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources; b. Request that the SWRCB review existing water appropriations for compliance; c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible. 	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-BC-06
4	D	KR-BC-08	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for fish, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim	KR-BC-07
4	E	KR-BC-09	Improve coho salmon passage at stream and road crossings, including measures to: <ul style="list-style-type: none"> a. Replace culverts on both USFS and Caltrans roads with structures allowing coho salmon passage; b. Treat coho salmon passage problems associated with the USFS roads; c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and d. Encourage the USFS and County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades. 	Potential Lead: CDFG Others: USFS, Caltrans	Interim/ Ongoing	KR-BC-08
4	D	KR-BC-10	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: <ul style="list-style-type: none"> a. LWD placement; b. Management to promote conifer recruitment; and c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors. 	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-BC-09
4	D	KR-BC-11	Provide technical support as an incentive to landowners for ongoing efforts of restoring LWD and shade to the watershed.	Potential Lead: USFS, NOAA Fisheries, CDFG Others: CDF, Landowners	Interim	KR-BC-10
4	C	KR-BC-12	Where necessary, provide riparian protection from livestock while providing off-site watering.	Potential Lead: USFS Others: Landowners	Interim	KR-BC-11

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SALMON RIVER HA						
D	SA-HA-01	Reduce sediment and provide coho salmon passage for all life history stages where roads affect streams inhabited by coho salmon.	Potential Lead: Road Management and Fisheries Barrier Work Group Task Force, USFS Others: Landowners, County, CDFG	Interim	SA-HA-01	
D	SA-HA-02	Reduce sediment by accelerating the Northwest Forest Plan road assessment schedule.	Potential Lead: USFS Others: County, CDFG	Interim	SA-HA-01b	
D	SA-HA-03	Reduce sediment where roads affect streams inhabited by coho salmon by completing the road sediment inventory assessment of County roads.	Potential Lead: County Others: USFS, CDFG	Interim/ Ongoing	SA-HA-01c	
D	SA-HA-04	Reduce sediment where roads affect streams inhabited by coho salmon by implementing the treatment of the road sediment inventory of county roads.	Potential Lead: County Others: USFS, CDFG	Interim	SA-HA-01d	
D	SA-HA-05	Provide coho salmon passage to all life history stages where roads affect streams inhabited by coho salmon implement the recommendations for the completed assessment of barriers.	Potential Lead: County, Road Management and Fisheries Barrier Work Group Task Force Others: USFS, CDFG, Landowners	Interim	SA-HA-01e	
E	SA-HA-06	Foster the multi-agency task force to identify and prioritize barriers to fish passage, and implement corrective treatments. This task force would include at a minimum, representatives from the Salmon River Restoration Council, Karuk Tribe, USFS, NOAA Fisheries, USFWS, and the Department.	Potential Lead: Road Management and Fisheries Barrier Work Group Task Force (Salmon River Restoration Council, Karuk Tribe, USFS, NOAA Fisheries, USFWS, County, and CDFG)	Interim/ Ongoing	SA-HA-02	
D	SA-HA-07	Educate landowners, restoration specialist, and watershed groups to reduce the impacts of private roads on coho salmon.	Potential Lead: CDFG, Road Management and Fisheries Barrier Work Group Task Force Others: Salmon River Restoration Council, Landowners	Interim/ Ongoing	SA-HA-03	
C	SA-HA-08	Encourage collaborative efforts among agencies and stakeholders to control or remove invasive exotics using integrated pest management techniques, emphasizing manual treatments.	Potential Lead: CDFG, Salmon River Noxious Weed Management Area Groups Others: Landowners, Academia, Native Plant Advocates	Interim/ Ongoing	SA-HA-04	
C	SA-HA-09	Reduce the risk of large, severe fires through fuels management around residential structures, homes, and fire escape routes. Implement Salmon River Fire Safe Council recommendations promoting the reduction of fuel near residences to reduce human-caused fires spreading into the forest and causing harm to coho salmon habitat.	Potential Lead: Salmon River Fire Safe Council Others: County, CDFG, CDF, USFS	Interim/ Ongoing	SA-HA-05	
C	SA-HA-10	Re-establish fire regimes consistent with Northwest Forest Plan objectives to reduce the risk and impact of large, severe fire on coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Salmon River Fire Safe Council Others: USFS	Interim	SA-HA-06	
C	SA-HA-11	If necessary, integrate coho salmon conservation into the Northwest Forest Plan regarding fire suppression and overall fuel management plan.	Potential Lead: USFS	Interim	SA-HA-06b	

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SALMON RIVER HSA (continued)						
D	SA-HA-12	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade, primarily in tributaries and key refugia areas, through:	<ul style="list-style-type: none"> a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors; and d. Incentives to landowners, such as technical support. 	Potential Lead: USFS, CDFG Others: NOAA Fisheries, Watershed Groups, County, USFWS, Karuk Tribe, Salmon River Restoration Council, Landowners	Interim/ Ongoing	SA-HA-09
C	SA-HA-13	Develop a plan to prioritize and remediate mine tailings.		Potential Lead: CDFG, CGS, North Coast RWQCB, USFS Others: NOAA Fisheries, Karuk Tribe, USFWS, Salmon River Restoration Council, Landowners	Interim/ Ongoing	SA-HA-10
C	SA-HA-14	Implement the plan to remediate prioritized mine tailings, focusing on tributaries and key area of the Salmon River.		Potential Lead: CGS, USFS, North Coast RWQCB Others: NOAA Fisheries, CDFG, USFWS, Karuk Tribe, Salmon River Restoration Council	Interim/ Ongoing	SA-HA-10b
Lower Salmon HSA						
3	D	SA-LS-01	Restore and maintain habitat connectivity between the Salmon River and Nordheimer Creek where low flow or sediment aggradation has been known to restrict coho salmon passage.	Potential Lead: USFS, Watershed Group Others: Karuk Tribe	Interim/ Ongoing	SA-LS-01
		SA-LS-02	Support ongoing maintenance and operations for the Nordheimer Creek Fish Ladder.	Potential Lead: USFS, Watershed Group Others: Karuk Tribe		SA-LS-02
3	D	SA-SB-01	Reduce current and future sediment inputs to Specimen, North Russian, and South Russian creeks:	Potential Lead: USFS, Watershed Group Others: Karuk Tribe	Interim/ Ongoing	SA-SB-01
			<ul style="list-style-type: none"> a. Do road upgrade/ improvement/maintenance/storm proofing (out sloping roads, reducing hydrologic connectivity); b. Provide slope stabilization where feasible; c. Reduce or avoid alteration of natural hill slope drainage patterns; and d. Upgrade stream/road crossings and ensure coho salmon passage. 			
3	D	SA-SB-02	Conduct riparian revegetation and stream-bank stabilization along entire North Fork:	Potential Lead: USFS, Watershed Group Others: Karuk Tribe	Interim/ Ongoing	SA-SB-02
			<ul style="list-style-type: none"> a. Control vegetation removal in the streamsides zone; b. Increase the number of conifers and deciduous trees to provide stable stream shading and which will eventually become a source for LWD; and c. Revegetate flood plain areas using native species. 			

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SHASTA VALLEY AND SCOTT RIVER HAs – Shasta Valley, Scott Bar, and Scott Valley HSAs					
4 C	SS-HA-01	Reduce the risk of large, severe fires (especially in the Scott) by implementing the Fire Safe Council's recommendations promoting the reduction of fuel near residences to reduce human-caused fires spreading into the forest and causing harm to coho salmon habitat.	Potential Lead: CDF, USFS Others: County, Landowners, CDFG	Interim/ Ongoing	SS-HA-01
4 D	SS-HA-02	Reduce human-caused sediment input from upslope sources identified through public and private inventories.	Potential Lead: USFS, CDF, Landowners Others: Caltrans, County, CDFG	Interim/ Ongoing	SS-HA-02
4 D	SS-HA-03	Prioritize and implement remediation activities for human-caused sediment, which would include slope stabilization, minimizing sediment production, and eliminating coho salmon passage barriers.	Potential Lead: USFS, CDF, Landowners Others: Caltrans, County, CDFG	Interim/ Ongoing	SS-HA-03b
4 D	SS-HA-04	Encourage Federal, State, and county agencies and private landowners to reduce impacts to coho salmon habitat from public and private road systems.	Potential Lead: CDFC Others: USFS, CDF, Caltrans, County, Landowners	Interim	SS-HA-03
4 D	SS-HA-05	Continue road and/or watershed assessments to identify and prioritize sources and risks of road-related sediment delivery to watercourses.	Potential Lead: CDFC, CDF, Caltrans, Landowners	Interim/ Ongoing	SS-HA-03b
4 D	SS-HA-06	Reduce road densities where necessary and appropriate.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	SS-HA-03c
4 D	SS-HA-07	Decrease potential for stream flow to become diverted at road crossings during high flow events, resulting in flow along the road that returns to the channel at undesirable locations.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim/ Ongoing	SS-HA-03d
4 D	SS-HA-08	Stabilize slopes along roadways to minimize or prevent erosion and to minimize future risk of eroded material entering streams.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	SS-HA-03e
4 D	SS-HA-09	Minimize alteration of natural hill slope drainage patterns to decrease erosion and sediment input into the streams.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	SS-HA-03f
4 D	SS-HA-10	Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies and private landowners for road maintenance activities, capital project activities, and dedicated funding to pay for coho salmon passage projects.	Potential Lead: CDFG, Counties, USFS, NOAA Fisheries Others: CDF, Caltrans, Landowners	Interim	SS-HA-03g
4 E	SS-HA-11	Encourage funding authorities to allocate adequate resources to prioritize and upgrade crossings to provide coho salmon passage within the range of coho salmon to pass 100-year flows and the expected debris loads (e.g., LWD that might be mobilized).	Potential Lead: CDFG Others: NOAA Fisheries, USFS, Caltrans, CDF, County, Landowners	Interim/ Ongoing	SS-HA-04
4 E	SS-HA-12	Identify barriers to passage and prioritize them for removal, through collaborative efforts with other agencies.	Potential Lead: CDFG Others: NOAA Fisheries, USFS, Caltrans, CDF, County, Landowners	Interim/ Ongoing	SS-HA-05
4 C	SS-HA-13	Design a reclamation plan to remediate effects of historical mining (e.g., tailings near Callahan) with the goal of enhancing the production and survival of coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, County, CGS, Landowners	Interim	SS-HA-06

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SHASTA VALLEY AND SCOTT RIVER HAs – Shasta Valley, Scott Bar, and Scott Valley HSAs (continued)						
4	C	SS-HA-14	Implement the reclamation plan that remedies effects of historical mining (e.g., tailings near Callahan) with the goal of enhancing the production and survival of coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, County, CGS, Landowners	Interim	SS-HA-06b
4	C	SS-HA-15	Identify locations, costs, and restoration potential of intensively mined areas.	Potential Lead: CDFG Others: NOAA Fisheries, County, CGS, Landowners	Interim	SS-HA-06c
4	D	SS-HA-16	Improve water quality by reducing or minimizing both domestic and municipal sources of nutrient input (i.e., sewage treatment plant discharge and storm drain runoff). Support efforts by cities and rural communities to complete system upgrades to achieve CWA compliance.	Potential Lead: RWQCB Others: County, Landowners, CDFG	Interim/ Ongoing	SS-HA-07
4	D	SS-HA-17	Minimize impacts of cattle grazing on watercourses through exclusion fencing as necessary and appropriate (e.g., providing off-site watering, preventing overgrazing, etc.).	Potential Lead: RCDs Others: Landowners, CDFG, NOAA Fisheries	Interim, Ongoing	SS-HA-08
4	D	SS-HA-18	Support cooperative State and local efforts to redirect Big Mill Creek into its historic channel under State Route 3, thereby restoring adult and juvenile coho salmon access to approximately 1.25 miles of quality spawning and rearing habitat.	Potential Lead: CDFG Others: Caltrans, Landowners	Interim	SS-HA-09
4	E	SS-HA-19	Assess the potential benefits and technical feasibility of increasing stream flows in the Scott River for fish and wildlife within the Klamath National Forest.	Potential Lead: CDFG Others: SWRCB, DWR, Landowners	Interim	SS-HA-10
4	D	SS-HA-20	Request the USBR to study the potential benefits of adjusting Iron Gate flows to better meet the needs of adult and juvenile life stages to enhance Scott/Shasta coho salmon production, consistent with the flow needs of the Klamath and Trinity rivers.	Potential Lead: CDFG Others: USBR	Interim	SS-HA-11
4	D	SS-HA-21	Complete the comprehensive, peer-reviewed watershed restoration plans for the Shasta and Scott rivers that include identification and prioritization of all restorative needs in each basin. When restoration funds are limited, implementation should occur on the highest priority issues most likely to effectively address coho salmon needs within each basin.	Potential Lead: RCDs, Watershed Council Others: CDFG, NOAA Fisheries, USFWS	Interim/ Ongoing	SS-HA-18
C	SS-HA-22	Financially support ongoing watershed planning.				
4	E	SS-HA-23	Preserve water quality, quantity and coho salmon habitat in the Big Springs area in the Shasta River by possibly using incentive-based alternatives with willing participants.	Potential Lead: CDFG Others: Landowners, RCD	Interim/ Continual	SS-HA-24
4	E	SS-HA-24	Maintain and revegetate, where appropriate, riparian trees in headwaters and along creeks that provide shade habitat essential for coho salmon.	Potential Lead: CDFG Others: Landowners, RCD	Interim/ Continual	SS-HA-25
4	D	SS-HA-25	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; and b. Management to promote conifer recruitment.	Potential Lead: CDFG Others: Landowners, RCD	Interim/ Ongoing	SS-HA-26

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
KLAMATH RIVER HU – Hornbrook HSA						
4	D	KR-HB-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HB-01
			a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;			
			b. Request that the SWRCB review existing water appropriations for compliance;			
			c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and			
			d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible.			
4	D	KR-HB-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HB-02
4	E	KR-HB-03	Improve coho salmon passage at stream and road crossings, including measures to:	Potential Lead: CDFG Others: USFS, Caltrans	Interim/ Ongoing	KR-HB-03
			a. Replace culverts on both the USFS and Caltrans roads with structures allowing coho salmon passage;			
			b. Treat coho salmon passage problems associated with the USFS roads;			
			c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and			
			d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.			
4	D	KR-HB-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HB-05
			a. LWD placement;			
			b. Management to promote conifer recruitment;			
			c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors; and			
			d. Incentives to landowners, such as technical support.			
4	E	KR-HB-05	Study the likely benefits to instream flow of increasing the efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet actions that are given a high priority.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-HB-09
4	E	KR-HB-06	Identify water diverters; request that the SWRCB review and/or modify water use based on the needs of coho salmon and authorized diverters.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-HB-10
4	D	KR-HB-07	Look for opportunities to acquire water rights for instream flow from willing participants who possess valid water rights.	Potential Lead: CDFG Others: Landowners, RCDs	Interim	KR-HB-11

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
KLAMATH RIVER HU – Irongate HSA						
4	D	KR-IG-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should:	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-01
			a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources;			
			b. Request that the SWRCB review existing water appropriations for compliance;			
			c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and			
			d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible.			
4	D	KR-IG-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-02
4	E	KR-IG-03	Improve coho salmon passage at stream and road crossings, including measures to:	Potential Lead: USFS, Caltrans Others: CDFG	Interim/ Ongoing	KR-IG-03
			a. Replace culverts on both USFS and Caltrans roads with structures allowing coho salmon passage;			
			b. Treat coho salmon passage problems associated with the USFS roads;			
			c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and			
			d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.			
4	D	KR-IG-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-05
			a. LWD placement;			
			b. Management to promote conifer recruitment;			
			c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors; and			
			d. Incentives to landowners, such as technical support.			
4	E	KR-IG-05	Study the likely benefits to instream flow of increasing the efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet actions that are given a high priority.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-IG-09
4	E	KR-IG-06	Identify water diverters and request that the SWRCB review and/or modify water use based on the needs of coho salmon and authorized diverters.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-IG-10
4	D	KR-IG-07	Look for opportunities to acquire water rights for instream flow from willing participants who possess valid water rights.	Potential Lead: CDFG Others: Landowners, RCDs	Interim	KR-IG-11

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TRINITY RIVER HU					
E	TR-HU-01	Implement the Trinity River Record of Decision (ROD), which would provide:	Potential Lead: USBR Others: USFS, NOAA Fisheries, USFWS, CDFG	Interim	TR-HU-01
	a.	Variable annual instream flows for the Trinity River from the Trinity River Dam (TRD) based on forecasted hydrology for the Trinity River basin as of April 1st of each year, ranging from 369,000 acre-feet in critically dry years to 815,000 af in extremely wet years;			
	b.	Physical channel rehabilitation, including the removal of riparian berms and the establishment of side-channel habitat;			
	c.	Sediment management, including the supplementation of spawning gravels below the TRD and reduction in fine sediments which degrade coho salmon habitats;			
	d.	Watershed restoration efforts, addressing negative impacts which have resulted from land use practices in the Basin; and			
	e.	Infrastructure improvements or modifications, including rebuilding or fortifying bridges and addressing other structures affected by the peak instream flows provided by the ROD.			
C	TR-HU-02	Recommend to the NCRWQCB that the TMDL process consider alterations in the sediment load allocations and targets due to implementation of the ROD.	Potential Lead: CDFG Others: RWQCB	Interim	TR-HU-02
D	TR-HU-03	Implement the Trinity River TMDL instream flushing flows without affecting ROD allocations.	Potential Lead: CDFG, USBR Others: RWQCB	Interim	TR-HU-06
D	TR-HU-04	Establish TMDL implementation plans for the mainstem and South Fork using the upslope indicators and targets established in the Main Stem Load Allocation.	Potential Lead: CDFG, RWQCB Others: USBR	Interim	TR-HU-07
E	TR-HU-05	Develop a County grading ordinance based on exemption, certification, and permitting criteria.	Potential Lead: County Others: CDFG	Long-term	TR-HU-08
C	TR-HU-06	Implement county grading ordinance based on exemption, certification, and permitting criteria.	Potential Lead: County Others: CDFG	Long-term / Continual	TR-HU-08b
C	TR-HU-07	Implement the Five Counties Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds.	Potential Lead: Trinity County Others: CDFG	Interim/ Continual	TR-HU-09
D	TR-HU-08	Support continued State and Federal funding for the implementation of sediment reduction programs for private lands and the implementation and funding of treatment of sediment source sites on County roads using the prioritization of the Direct Inventory of Roads and Their Treatment (DIRT).	Potential Lead: County Others: Landowners, CDFG	Interim/ Ongoing	TR-HU-10
C	TR-HU-09	Establish incentives and standards for private riparian and wetland areas protection based on flexible subdivision design; road, curb and gutter requirements; minimum lot size and density; clustering and other techniques.	Potential Lead: CDFG Others: County	Interim	TR-HU-11

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TRINITY RIVER HU (continued)						
C	TR-HU-10	Establish riparian setbacks for grading activities on private lands, based on Department 1994 recommendations to District 1 counties.	Potential Lead: CDFG Others: County	Interim	TR-HU-12	
D	TR-HU-11	Evaluate the impacts of non-native fish species on coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	TR-HU-13	
D	TR-HU-12	Develop management guidelines to reduce impacts from non-native fish species.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	TR-HU-13	
C	TR-HU-13	Develop or amend existing County Conservation, Open Space and Land Use Elements and Community Plans to focus development away from riparian habitats, wetland habitats, or steep slopes. Consider all species habitats, wildland-urban fire hazard, and other land uses factors in making allocations.	Potential Lead: CDFG Others: Trinity County	Interim	TR-HU-14	
C	TR-HU-14	Analyze the feasibility and appropriateness of site-specific 2084 authorization for sport fishing for hatchery coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	TR-HU-15	
Douglas City HSA						
5	E	TR-DC-01	Investigate all water diversions on Reading Creek, Indian Creek, and Browns Creek.	Potential Lead: CDFG Others: SWRCB, NOAA Fisheries	Interim	TR-DC-01
5	E	TR-DC-02	Restore coho salmon passage and instillation of screens to Department NOAA Fisheries standards. Provide incentives to landowners when necessary to reach this goal.	Potential Lead: CDFG Others: SWRCB, NOAA Fisheries	Interim	TR-DC-01
5	D	TR-DC-03	Increase riparian function in lower Reading, Indian, Browns creeks with conservation easements or landowner incentives that reduce agricultural and grazing impacts.	Potential Lead: CDFG Others: RCD, Landowners	Interim/ Ongoing	TR-DC-02
5	D	TR-DC-04	Implement sediment reduction plans consistent with County plans and policies.	Potential Lead: CDFG Others: RCD, County, Landowners	Interim/ Ongoing	TR-DC-03
Grouse Creek HSA						
3	D	TR-GC-01	Continue implementation of habitat restoration, including measures to stabilize upslope areas, enhance riparian zones, storm proof, stabilize, and/or decommission roads, and replace culverts.	Potential Lead: USFS Others: NOAA Fisheries, County, RCD, CDFG, CDF, Landowners	Interim/ Ongoing	TR-GC-01
Hyampom HSA						
2	D	TR-HY-01	Develop a management plan for Big Slide to reduce human contributions to mobilization of sediments, including evaluating relocation of the county road that crosses Big Slide.	Potential Lead: USFS Others: CDFG, County	Interim	TR-HY-01
2	D	TR-HY-02	Implement the management plan for Big Slide to reduce human contributions to mobilization of sediments, including evaluating relocation of the county road that crosses Big Slide.	Potential Lead: USFS Others: CDFG	Interim	TR-HY-01b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Hyampom HSA (continued)						
2	C	TR-HY-03	Manage forest stands to reduce their susceptibility to large, severe fires. Where appropriate, this should include actions to accelerate the growth of conifers for LWD recruitment, develop mature shade canopy in the riparian zone, and provide for other multiple use goals.	Potential Lead: CDFG Others: USFS	Interim/ Ongoing	TR-HY-02
2	D	TR-HY-04	Continued implementation of habitat restoration, including measures to stabilize upslope areas, enhance riparian zones, storm proof, stabilize, and/or decommission roads, and replace culverts.	Potential Lead: USFS Others: NOAA Fisheries, County, RCD, CDFG, CDF, Landowners	Interim/ Ongoing	TR-HY-03
Hayfork HSA						
2	E	TR-HA-01	Establish agricultural/residential water conservation programs using incentive programs if necessary.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim/ Ongoing	TR-HA-01
2	D	TR-HA-02	Amend Trinity County's Critical Water Resources Overlay zone to address new riparian water rights developed as a result from parcel subdivision. The amendment should include expanding the overlay zoning to additional watersheds where summer surface flows are limiting factors for residents and coho salmon.	Potential Lead: CDFG Others: County	Interim	TR-HA-02
2	C	TR-HA-03	Continue implementation of riparian improvements through restoration activities, land use planning, and conservation easements.	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Private Landowners	Interim/ Ongoing	TR-HA-03
2	D	TR-HA-04	Support efforts to provide livestock exclusion fencing where feasible and appropriate, while providing off-site watering.	Potential Lead: Landowners, RCDs Others: NRCS	Interim/ Continual	TR-HA-04
2	D	TR-HA-05	Continue to implement habitat restoration, including measures to stabilize upslope areas, enhance riparian zones, storm proof, stabilize, and/or decommission roads, and replace culverts.	Potential Lead: USFS Others: NOAA Fisheries, County, RCD, CDFG, CDF, Landowners	Interim/ Ongoing	TR-HA-05
MAD RIVER HU						
D	MR-HU-01	Work with landowners and other entities to reduce coho salmon tributary stream temperature through the development of mature coniferous stream-side over-story within the riparian zone by continuing:	a. Planting programs in stream corridors barren of mature conifers; b. THP review; and c. Riparian management with cattle ranchers.	Potential Lead: CDFG, NCRWQCB, CDF Others: Landowners, CCC, Watershed Groups, NOAA Fisheries, USFS, RCD	Interim/ Continual	MR-HU-01
C	MR-HU-02	Recommend the SWRCB make a high priority the:	a. Review of authorized diversions that have no provisions to protect coho salmon; and b. Identification of unauthorized diversions and enforcement actions to stop them.	Potential Lead: NCRWQCB, SWQCB Others: DWR, CDFG	Long-term	MR-HU-02

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
MAD RIVER HU (continued)					
E	MR-HU-03	Work with landowners and other entities to:	Potential Lead: CDFG Others: CCC, CDF, Landowners, NOAA Fisheries, County, Watershed Groups	Interim/ Continual	MR-HU-03
	a.	Protect existing LWD recruitment potential through the retention of mature coniferous trees in the riparian zone;			
	b.	Establish adequate streamside buffer areas;			
	c.	Increase the amount of in-channel LWD;			
	d.	Continue to review THPs; and			
	e.	Continue riparian management projects.			
E	MR-HU-04	Conduct pre-project geological surveys where needed.	Potential Lead: NCRWQCB, CDF, CDFG, County, CGS	Interim/ Continual	MR-HU-04
D	MR-HU-05	Develop permit conditions to limit activities within unstable areas, identifying appropriate mitigation measures.	Potential Lead: NCRWQCB, CDF, CDFG, County, CGS	Interim/ Continual	MR-HU-04b
D	MR-HU-06	Adopt measures to protect riparian vegetation for all development over which counties and incorporated areas have jurisdiction.	Potential Lead: Counties and Incorporated Areas Others: CDFG, NOAA Fisheries	Long-term	MR-HU-05
E	MR-HU-07	Assess barriers to coho salmon passage; prioritize barriers for removal, and develop a plan to treat the barriers, with Warren Creek given a high priority for treatment.	Potential Lead: CDFG Others: Caltrans, Landowner, County, NOAA Fisheries	Interim	MR-HU-07
E	MR-HU-08	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage. This is a known problem at Cañon Creek, Dry Creek, and North Fork Mad River. The plan should:	Potential Lead: CDFG , NOAA Fisheries, Landowners	Long-term	MR-HU-08
	a.	Evaluate management techniques;			
	b.	Implement the identified strategy; and			
	c.	Address permitting complexity for identified implementation measures.			
D	MR-HU-09	Consider the mouths of Cañon Creek, Dry Creek, and North Fork Mad River as locations to:	Potential Lead: CDFG Others: County	Long-term	MR-HU-09
	a.	Identify causes of loss of connectivity;			
	b.	Evaluate management techniques;			
	c.	Implement the identified strategy; and			
	d.	Address permitting complexity for identified implementation measures.			
C	MR-HU-10	Continue stream management activities with landowners in Lindsay Creek.	Potential Lead: CDFG Others: Landowners, Watershed Groups	Interim/ Continual	MR-HU-10
C	MR-HU-11	Develop programs to control exotic and invasive vegetation, especially reed canary grass, where necessary to protect coho salmon habitat.	Potential Lead: CDFG, UCCE Others: Redwood Science Lab, HSU	Interim	MR-HU-11
C	MR-HU-12	Evaluate the impact of the Mad River Hatchery steelhead production on coho salmon.	Potential Lead: CDFG Others: USFWS	Long-term	MR-HU-12
E	MR-HU-13	Encourage Federal, State, and county agencies and private landowners to reduce impacts to coho salmon habitat from public and private road systems.	Potential Lead: CDFG Others: USFS, CDF, Caltrans, County, Landowners	Interim	MR-HU-13

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER	
MAD RIVER HU (continued)						
D	MR-HU-14	Continue road and/or watershed assessments to identify and prioritize sources and risks of road-related sediment delivery to watercourses.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim/ Ongoing	MR-HU-14	
D	MR-HU-15	Reduce road densities where necessary and appropriate.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	MR-HU-15	
D	MR-HU-16	Decrease potential for stream flow to become diverted at road crossings during high flow events, resulting in flow along the road that returns to the channel at undesirable locations.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim/ Ongoing	MR-HU-16	
D	MR-HU-17	Stabilize slopes along roadways to minimize or prevent erosion and to minimize future risk of eroded material entering streams.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	MR-HU-17	
D	MR-HU-18	Minimize alteration of natural hill slope drainage patterns to decrease erosion and sediment input into the streams.	Potential Lead: Counties, USFS Others: CDFG, CDF, Caltrans, Landowners	Interim	MR-HU-18	
D	MR-HU-19	Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies and private landowners for road maintenance activities, capital project activities, and dedicated funding to pay for fish passage projects.	Potential Lead: CDFG, Counties, USFS, NOAA Fisheries Others: CDF, Caltrans, Landowners	Interim	MR-HU-19	
D	MR-HU-20	Encourage CHERT to incorporate coho salmon friendly measures.	Potential Lead: CDFG Others: CHERT, NOAA Fisheries, USACE	Interim/ Continual	MR-HU-20	
Blue Lake HSA						
4	C	MR-BL-01	Develop a watershed restoration plan in conjunction with landowners, municipalities, and Tribal interests.	Potential Lead: Watershed Groups Others: Landowners, County, Tribes, Municipalities, CDFG	Long-term	MR-BL-01
4	C	MR-BL-02	Implement the watershed restoration plan.	Potential Lead: Watershed Groups Others: Landowners, County, Tribes, Municipalities, CDFG	Long-term	MR-BL-01
4	C	MR-BL-03	Agencies and land managers should work with qualified Watershed Groups to develop and support well-informed watershed communities with regards to coho salmon habitat issues.	Potential Lead: Watershed Groups	Long-term	MR-BL-02
4	C	MR-BL-04	Develop and implement an outreach program regarding activities that protect and/or restore coho salmon habitat, and the public's responsibility for protecting and restoring coho salmon habitat.	Potential Lead: Watershed Groups, CDFG	Long-term	MR-BL-02
Butler Valley HSA						
5	D	MR-BV-01	Establish adequate streamsides buffer areas to promote appropriate water temperatures for coho salmon.	Potential Lead: Humboldt County, Landowners CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-01
5	C	MR-BV-02	Protect streamsides vegetation from unnecessary vegetation removal.	Potential Lead: Humboldt County, Landowners CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-01b

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Butler Valley HSA (continued)						
5	C	MR-BV-03	Maintain large conifers within the riparian zone.	Potential Lead: Humboldt County, Landowners, Others: CDF, CDFG, NOAA Fisheries	Interim/Continual	MR-BV-01c
5	E	MR-BV-04	Assess and prioritize the road-related sources of input of fine and coarse sediments into streams.	Potential Lead: Humboldt County, Landowners, CDF, CDFG, NOAA Fisheries, CDF	Interim	MR-BV-02
5	D	MR-BV-05	Address priority sources of fine and coarse sediments into streams.	Potential Lead: Humboldt County, Landowners Others: CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-02b
5	C	MR-BV-06	Where appropriate, reduce management activities within unstable areas.	Potential Lead: Humboldt County, Landowners Others: CDF, CDFG, NOAA Fisheries	Interim/Continual	MR-BV-02c
5	E	MR-BV-07	Identify and prioritize culverts that are passage barriers to suitable habitat for juvenile or adult coho salmon.	Potential Lead: Humboldt County, Caltrans, Landowners Others: CDF, CDFG, NOAA Fisheries	Interim	MR-BV-03
5	D	MR-BV-08	Upgrade prioritized culverts that to allow access to suitable habitat for juvenile or adult coho salmon.	Potential Lead: Humboldt County, Caltrans, Landowners Others: CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-03b
REDWOOD CREEK HU						
	E	RC-HU-01	Work with Redwood National and State Parks (RNSP), private landowners, and interested parties to improve habitat conditions of the estuary while protecting Highway 101 and the Town of Orick. These plans should aim toward restoring the historic form and function of the estuary/lagoon and slough channels, riparian forests, and adjacent wetlands. This includes providing for:	Potential Lead: RNSP, USACE, County Others: RNSP, CDF, NOAA Fisheries, Landowners, County, CCC, Watershed Groups, Coastal Conservancy, CDFG	Interim	RC-HU-01
		a.	Unconfined channels by modifying levees;			
		b.	Restoration of riparian vegetation, tree cover, wetlands, and off-channel and rearing habitat;			
		c.	Increased sediment transport, pool depth, and LW/D;			
		d.	Restoring natural drainage patterns from adjacent wetlands; and			
		e.	Improving the conditions of sloughs and tributaries to the estuary (Strawberry, Dorrance, and Sand Cache creeks).			
	E	RC-HU-02	Modify levee requirements to maintain habitat for coho salmon while maintaining flood control, including modifying maintenance manuals to be consistent with habitat requirements of coho salmon.	Potential Lead: USACE, RNSP, DPR, and Humboldt County Public Works Department, NOAA Fisheries Others: CDFG	Long-term	RC-HU-02

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
REDWOOD CREEK HU (continued)						
E	RC-HU-03	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through plantings, release of small, suppressed conifers, and where appropriate, control of alders, blackberries, and other competitors; and d. Incentives to landowners, such as funding and technical support.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, RNSP, County, Watershed Groups	Interim	RC-HU-03
C	RC-HU-04	Complete the assessments of sediment sources and road upgrade assessments.		Potential Lead: CDFG, Others: NCRWQCB, CDF, Landowners, CCC, RNSP, Watershed Groups, NOAA Fisheries, County	Interim/ Ongoing	RC-HU-04
C	RC-HU-05	Implement the recommendations contained in the assessments for sediment paying particular attention to road assessment and improvement projects; also incorporate measures to preclude sediment delivery to stream systems in near-stream land use planning (especially on slopes greater than 35%).		Potential Lead: CDFG Others: NCRWQCB, CDF, Landowners, CCC, RNSP, Watershed Groups, NOAA Fisheries, County	Interim/ Ongoing	RC-HU-04b
E	RC-HU-06	Develop measures to protect existing LWD recruitment potential through retention of mature trees in the riparian zone, establishing adequate near stream buffer areas protected from vegetation removal, and increasing the amount of in-channel LWD (Root wads should be left on LWD).		Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, RNSP, County, Watershed Groups	Interim	RC-HU-05
D	RC-HU-07	Implement measures to protect existing LWD recruitment potential through retention of mature trees in the riparian zone, establish adequate near stream buffer areas protected from vegetation removal, and increase the amount of in-channel LWD.		Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, RNSP, County, Watershed Groups	Interim/ Continual	RC-HU-05b
E	RC-HU-08	Coordinate a long-term, concerted effort between land owners, interested parties, and responsible agencies to determine the current population size and trends of coho salmon of Redwood Creek.		Potential Lead: RNSP, CDFG Others: NOAA Fisheries, USFWS, Landowners	Interim/ Ongoing	RC-HU-06
E	MR-HU-09	Conduct pre-project geological surveys where needed.		Potential Lead: NCRWQCB, CDF, CDFG, County, CGS	Interim/ Continual	MR-HU-04
C	RC-HU-10	Continue to review and improve THPs with regard to protection of coho salmon and their habitat.		Potential Lead: CDFG	Ongoing/ Continual	RC-HU-08

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
TRINIDAD HU						
	E	TP-HU-01	Assess and prioritize sediment sources, particularly roads that have not been assessed, and acknowledge progress that has been made in addressing sediment sources.	Potential Lead: County, Landowners, Caltrans Others: CDF, CDFG, CCC, NCRW/QCB, Watershed Groups, NOAA Fisheries	Interim	TP-HU-01
	D	TP-HU-02	Prioritize and treat sediment sources.	Potential Lead: County, Landowners, Caltrans Others: CDF, CDFG, CCC, NCRW/QCB, Watershed Groups, NOAA Fisheries	Interim	TP-HU-01b
	D	TP-HU-3	Work with Humboldt County and landowners to maintain flood plain capacity and prevent future encroachment on the flood plain.	Potential Lead: County, Army Corps Others: Caltrans, CDFG, NOAA Fisheries, Landowners	Long-term	TP-HU-02
Big Lagoon HSA						
4	E	TP-BL-01	Continue to work with private landowners to develop riparian buffers with an adequate conifer component and canopy closure to reduce temperatures, increase LWI, and provide sediment filtration.	Potential Lead: CDFG Others: Landowners, CDF, County, CCC, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	TP-BL-01
4	C	TP-BL-02	Develop a plan to restore the historic flood plain on Mill Creek (a.k.a. Pitcher Creek), in cooperation with landowners.	Potential Lead: CDFG Others: Landowners	Long-term	TP-BL-02
4	C	TP-BL-03	Implement the plan to restore the historic flood plain on Mill Creek (a.k.a. Pitcher Creek), in cooperation with landowners.	Potential Lead: CDFG Others: Landowners	Long-term	TP-BL-02b
Little River HSA						
5	E	TP-LR-01	Develop a plan to improve the functioning of the lower river and estuary by re-establishing a functional flood plain and a more complex instream habitat and riparian zone. The plan should include the release of conifers, exclusion fencing where necessary, and riparian planting.	Potential Lead: Landowners, Watershed Groups Others: CDFG, CCC, NOAA Fisheries, County	Interim	TP-LR-01
5	D	TP-LR-02	Implement the plan to improve the functioning of the lower river and estuary.	Potential Lead: Landowners, Watershed Groups Others: CDFG, CCC, NOAA Fisheries, County	Interim	TP-LR-01b
5	C	TP-LR-03	Work with landowners to minimize the impacts of agricultural activities on the estuary.	Potential Lead: Watershed Groups, CDFG Others: County, NOAA Fisheries	Interim/ Continual	TP-LR-02
5	E	TP-LR-04	Appropriate agencies should enforce any violation of law that occurred from construction of cranberry bogs in the Little River; completion of appropriate mitigation should also be enforced.	Potential Lead: USACE, CDFG, NOAA Fisheries	Interim	TP-LR-03
5	C	TP-LR-05	Work with Humboldt County and landowners to maintain current flood plain capacity and prevent future encroachment on the flood plain.	Potential Lead: County, USACE Others: CDFG, NOAA Fisheries, Landowners	Long-term	TP-LR-04

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
EUREKA PLAIN HU – Eureka Plain HSA						
5	D	EP-HU-01	Support implementation of Humboldt County's provisions to protect Stream Management Areas and evaluate their effectiveness; recommend revisions as necessary.	Potential Lead: CDFG Others: Humboldt County	Interim/ Continual	EP-HU-02
5	E	EP-HU-02	Work with agencies and landowners, to re-establish estuarine function.	Potential Lead: CDFG, NOAA Fisheries Others: Coastal Commission, USACE, U.S. Coast Guard, City of Eureka, City of Arcata, Landowners	Interim	EP-HU-03
5	C	EP-HU-03	Acknowledge the Arcata City Sewage Treatment Project and encourage similar projects elsewhere where possible.	Potential Lead: CDFG Others: City of Arcata, California State University	Interim	EP-HU-04
5	E	EP-HU-04	Assess and prioritize sources of sediment and implement remediation projects.	Potential Lead: CDF Others: County, CDFG, Landowners, California Conservation Corps	Interim/ Ongoing	EP-HU-05
5	D	EP-HU-05	Implement the prioritized remediation projects for the sources of sediment.	Potential Lead: CDF Others: County, CDFG, Landowners, California Conservation Corps	Interim/ Ongoing	EP-HU-05b
5	E	EP-HU-06	Identify gaps in recent coho salmon habitat survey data.	Potential Lead: CDFG	Interim	EP-HU-06a
5	E	EP-HU-07	Conduct coho salmon habitat surveys in identified areas lacking data.	Potential Lead: CDFG	Interim	EP-HU-06a
5	E	EP-HU-08	Identify and prioritize rearing habitat reaches for protection.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06b
5	D	EP-HU-09	Improve quality and quantity of deep pools and spawning gravels.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06c
5	D	EP-HU-10	In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels and salt marsh.	Potential Lead: CDFG Others: Coastal Commission, Landowners	Interim/ Continual	EP-HU-06d
5	D	EP-HU-11	Maintain and protect channel conditions important for all life stages of coho salmon.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06e
5	D	EP-HU-12	Restore channel conditions important for all life stages of coho salmon.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06e
5	D	EP-HU-13	Identify and maintain reaches where naturally functioning channel and flood plain conditions exist.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06f
5	D	EP-HU-14	Restore a functioning flood plain and natural channel processes where practicable.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06f

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	E	EP-HU-15	Identify impacted reaches where a functioning flood plain could be re-established:	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06g
		a.	Prioritize areas that are not naturally functioning for restoration potential;			
		b.	Develop site specific project objectives to protect and restore naturally functioning channel and flood plain conditions where feasible.			
5	E	EP-HU-16	Conduct hydrologic analysis for all Humboldt Bay tributaries.	Potential Lead: CDFG Others: NOAA Fisheries	Interim	EP-HU-06h
5	E	EP-HU-17	Establish access for both adult and juvenile coho salmon to suitable habitat where practicable.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Ongoing	EP-HU-06i
5	E	EP-HU-18	Prioritize and upgrade for repair all county culverts already identified as coho salmon passage barriers.	Potential Lead: CDFG Others: County, Landowners	Interim/ Ongoing	EP-HU-06j
5	E	EP-HU-19	Conduct an inventory and prioritize for treatment migration barriers other than county culverts (private roads, tide gates), including Rocky and Washington gulches.	Potential Lead: CDFG Others: Landowners, Coastal Commission, NOAA Fisheries	Interim	EP-HU-06k
5	D	EP-HU-20	Conduct LWD surveys and identify locations of existing LWD structures and areas for potential recruitment and/or placement of LWD structures.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-21	Protect and maintain habitat associated with instream LWD.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06n
5	D	EP-HU-22	Increase the amount of LWD in rearing reaches.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-23	Establish adequate streamside buffer areas that are protected from vegetation removal ensuring retention of mature trees in the riparian corridor	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-24	Increase canopy by planting appropriate conifer and hardwood species composition along the stream where the canopy is not at acceptable levels. In many cases, planting will need to be coordinated to follow bank stabilization or upslope erosion control projects.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-25	Map areas where large conifer riparian habitat exists for future recruitment.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-26	Maintain functional riparian habitat.	Potential Lead: CDFG Others: CDF, County, Landowners	Interim/ Ongoing	EP-HU-06n
5	D	EP-HU-27	Conduct assessment of historic and present riparian conditions	Potential Lead: CDFG Others: CDF, County, Landowners	Interim/ Ongoing	EP-HU-06n
5	E	EP-HU-28	Develop site specific riparian restoration plans to:	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06
		a.	Restore degraded riparian habitat; and			
		b.	Establish a monitoring program to evaluate success of restoration projects.			

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	D	EP-HU-29	Prioritize and implement the site specific riparian restoration plans.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06o
5	D	EP-HU-30	Establish a monitoring program to identify turbidity and suspended sediment levels outside the beneficial range for all life stages of coho salmon.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06p
5	E	EP-HU-31	Reduce input of fine sediments into stream systems by: a. Conducting comprehensive road inventory; b. Carry out priority road related sediment reduction; c. Implement priorities for road-related sediment reduction projects identified in existing road inventories projects; d. Identify areas still needing road/erosion inventories; e. Identify on-going road maintenance needs; f. Identify landslide hazard areas such as steep unstable slopes, stream crossings, (other than those identified in the road inventory) and inner gorge area; g. Implement pre-project geological surveys and/or reducing management activities within these areas, especially road construction, grading, intensive timber harvests; and h. Identify and treat bank erosion sites.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06q
5	D	EP-HU-32	Establish temperature parameters beneficial to coho salmon during all life stages by: a. Evaluating temperature ranges in all tributaries; b. Review of existing temperature data; c. Identifying data gaps and establish a watershed-wide temperature monitoring program; and d. Determining if temperatures are a concern for coho salmon.	Potential Lead: CDFG Others: Landowners	Interim	EP-HU-06r
5	D	EP-HU-33	Prevent point and non-point source pollution (e.g., septic systems, live-stock, household chemicals, petro-chemicals, herbicides, fertilizer and other pollutants); identify priorities for pollution reduction and strategy to be pursued.	Potential Lead: RWCQB Others: Landowners, CDFG	Interim/ Continual	EP-HU-06t
5	E	EP-HU-34	Determine and maintain adequate flows for migrating juvenile and adult coho salmon by developing an inventory of current water rights, and conduct a field survey of water withdrawals in main-stem and tributaries.	Potential Lead: CDFC Others: SWRCB	Interim	EP-HU-06v
5	C	EP-HU-35	Maintain open space lands (e.g., agriculture, forestland) for water retention and limiting addition of impervious surfaces in the watershed.	Potential Lead: County Others: Coastal Commission, Landowners, CDFG	Interim/ Ongoing	EP-HU-06w
5	C	EP-HU-36	Identify socioeconomic impacts of watershed management and future possible solutions.	Potential Lead: County Others: Coastal Commission, CDF, Landowners	Interim	EP-HU-06x
5	D	EP-HU-37	Facilitate and sustain a well informed watershed community with regards to coho salmon habitat issues.	Potential Lead: RCDS, Watershed Groups Others: CDFG, NOAA Fisheries	Interim/ Continual	EP-HU-06y

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	C	EP-HU-38	Ensure that there are adequate incentives for landowners who choose to protect and/or restore watershed processes.	Potential Lead: CDFG Others: NOAA Fisheries	Interim/ Continual	EP-HU-06z
5	C	EP-HU-39	Continue urban stream day-lighting efforts in Arcata and Eureka to reconnect and restore coho salmon habitat.	Potential Lead: City of Arcata, City of Eureka Others: NOAA Fisheries, CDFG	Interim/ Ongoing	EP-HU-28
EEL RIVER HU						
	C	ER-HU-01	Support the existing watershed cooperative working groups and the formation of new groups where necessary.	Potential Lead: CDFG Others: RCDs, Watershed Groups	Interim/ Ongoing	ER-HU-01
	E	ER-HU-02	Acknowledge that the pike minnow is a problem and support efforts to control it.	Potential Lead: CDFG, NOAA Fisheries	Interim/ Ongoing	ER-HU-02
	D	ER-HU-03	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: CDFG Others: California Conservation Corps, CDF, USFS, DPR, Landowners	Interim/ Ongoing	ER-HU-03
		a. LWD placement;				
		b. Improvement of existing riparian zones through plantings, release of conifers, and manage alders, blackberries, and other competitors; and				
		c. Bank stabilization and fencing projects.				
	E	ER-HU-04	Recommend that the SWRCB make a high priority the identification of unauthorized diversions and enforcement actions to stop them.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim/ Continual	ER-HU-05
	D	ER-HU-05	Encourage CHERT to incorporate coho salmon-friendly measures.	Potential Lead: CDFG Others: CHERT, NOAA Fisheries, USACE	Interim/ Continual	ER-HU-07
	E	ER-HU-06	Develop a plan to restore an adequate migration corridor in the mainstem Eel River.	Potential Lead: CDFG Others: NOAA Fisheries, State Lands Commission	Interim	ER-HU-08
	D	ER-HU-07	Implement the plan to restore an adequate migration corridor in the mainstem Eel River.	Potential Lead: CDFG Others: NOAA Fisheries, State Lands Commission	Interim	ER-HU-08b
	E	ER-HU-08	Assess and prioritize sediment sources, including roads.	Potential Lead: CDFG Others: Landowners, Watershed Groups, RCD, NOAA Fisheries	Interim/ Ongoing	ER-HU-09
	D	ER-HU-09	Treat prioritized sediment sources, including roads.	Potential Lead: CDFG Others: Landowners, Watershed Groups, RCD, NOAA Fisheries	Interim/ Ongoing	ER-HU-10
	C	ER-HU-10	Identify coho salmon rearing impacts from Van Arsdale out-planting site.	Potential Lead: CDFG	Interim/ Ongoing	ER-HU-11
	D	ER-HU-11	In cooperation with agencies and landowners, plan to re-establish estuarine function, restore and maintain historical tidal areas, backwater channels and salt marsh.	Potential Lead: CDFG Others: Coastal Commission, Landowners	Interim/ Continual	ER-HU-12

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
EEL RIVER HU (continued)					
E	ER-HU-12	Request that Caltrans assess, prioritize, and treat culverts that are barriers to passage on Highway 101. Identify barriers to passage and prioritize them for removal, through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: County, Landowners, California Conservation Corps, CDFG	Interim	ER-HU-13
Ferndale HSA					
3	E	ER-FE-01	Develop the Salt River Local Implementation Plan to incorporate coho salmon-friendly measures, in cooperation with the agencies.	Potential Lead: USACE, CDFG Others: RCD, Watershed Group, City of Ferndale NOAA Fisheries, Humboldt County, NRCS	Interim
3	E	ER-FE-02	Complete the assessment and prioritization of the sediment sources in the watershed.	Potential Lead: USACE, CDFG Others: RCD, Watershed Group, City of Ferndale NOAA Fisheries, Humboldt County, NRCS	Interim
3	D	ER-FE-03	Treat the sediment sources in the watershed.	Potential Lead: USACE, CDFG Others: RCD, Watershed Group, City of Ferndale NOAA Fisheries, Humboldt County, NRCS	Interim
3	C	ER-FE -04	Acquire conservation easements as an incentive for landowners to conserve and enhance habitat.	Potential Lead: CDFG Others: Land Conservancies, Landowners	Interim/ Ongoing
Van Duzen River HSA					
3	E	ER-VD-01	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage. The plan should:	Potential Lead: CDFG, NOAA Fisheries, Landowners	Long-term
			a. Evaluate management techniques;		
			b. Implement the identified strategy; and		
			c. Address permitting complexity for identified implementation measures.		
3	D	ER-VD-02	Implement the plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage.	Potential Lead: CDFG, NOAA Fisheries, Landowners	Long-term
3	D	ER-VD-03	Recommend that CHERT incorporate coho salmon-friendly measures.	Potential Lead: CHERT, NOAA Fisheries, USACE	Interim/ Continual
3	D	ER-VD-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing
			a. LWD placement; and		
			b. Improvement of existing riparian zones through plantings, release and recruitment of conifers, and control of alders, blackberries, and other competitors.		

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Van Duzen River HSA (continued)						
3	E	ER-VD-05	Assess and prioritize sediment sources including roads.	Potential Lead: CDFG Others: Landowners, Watershed Groups, RCD, NOAA Fisheries	Interim/ Ongoing	ER-VD-05
3	D	ER-VD-06	Treat sediment sources including roads.	Potential Lead: CDFG Others: Landowners, Watershed Groups, RCD, NOAA Fisheries	Interim/ Ongoing	ER-VD-06
Scotta HSA						
3	C	ER-SC-01	Evaluate the benefits to coho salmon of removing the barrier on Bridge Creek.	Potential Lead: CDFG	Interim	ER-SC-02
South Fork Eel River HA						
	C	ER-SF-01	Explore opportunities to acquire conservation easements with conditions that provide benefits to coho salmon.	Potential Lead: CDFG	Interim/ Ongoing	ER-SF-01
Weott HSA						
5	C	ER-WE-01	Complete storm proofing of the Bull Creek watershed.	Potential Lead: DPR Others: CDFG	Interim/ Ongoing	ER-WE-01
5	C	ER-WE-02	Continue to implement the planting of trees and other habitat enhancement as necessary in the Bull and Salmon creek watersheds.	Potential Lead: DPR, Landowners Others: CDFG	Interim/ Ongoing	ER-WE-02
5	E	ER-WE-03	Assess and prioritize culverts that are barriers to coho salmon passage along Avenue of the Giants through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: CDFG, County, Landowners, California Conservation Corps	Interim	ER-WE-03
5	D	ER-WE-04	Treat the prioritized culverts that are barriers to coho salmon passage along Avenue of the Giants, through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: CDFG, County, Landowners, California Conservation Corps	Interim	ER-WE-03b
Benbow HSA						
5	D	ER-BE-01	Support a watershed assessment.	Potential Lead: CDFG Others: CDF, Counties, Landowners, NOAA Fisheries	Interim	ER-BE-01
Laytonville HSA						
5	C	ER-BE-02	Request that the CDF monitor Non-industrial Timber Management Plans to ensure that they are properly implemented.	Potential Lead: CDFG Others: CDF, Landowners	Interim	ER-BE-04
COHO SALMON RECOVERY STRATEGY						
5	D	ER-LA-01	Continue watershed restoration efforts, including measures to reduce temperatures in Ten-mile Creek.	Potential Lead: CDFG Others: Watershed Groups, Landowners, California Conservation Corps	Interim/ Ongoing	ER-LA-01
5	E	ER-LA-02	Prioritize culverts on county roads that are coho salmon barriers.	Potential Lead: County Others: CDFG	Interim/ Ongoing	ER-LA-02

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Laytonville HSA (continued)					
5 D	ER-LA-03	Treat culverts on county roads that are coho salmon barriers.	Potential Lead: County Others: CDFG	Interim/ Ongoing	ER-LA-02b
5 E	ER-LA-04	Work with the county to coordinate with landowners on the removal of coho salmon barriers on private property.	Potential Lead: CDFG Others: County, CDF, Landowners	Interim/ Ongoing	ER-LA-03
5 C	ER-LA-05	Support efforts by the county sheriff to enforce laws against illegal dumping and the Department of Health to clean up dumped materials.	Potential Lead: CDFG Others: County Sheriff, Department of Health	Interim/ Ongoing	ER-LA-04
5 D	ER-LA-06	Recommend that cities, counties, and Caltrans adopt maintenance manuals that protect coho salmon habitat (e.g., standards for side-casting of spoils and identification of spoils disposal sites).	Potential Lead: CDFG Others: Cities, Counties, Caltrans	Interim/ Ongoing	ER-LA-06
5 E	ER-LA-07	Minimize and reduce the effects of water diversions by addressing the season of diversion, installing off-stream reservoirs, requiring bypass flows protective of coho and natural hydrograph, and avoiding adverse impacts caused by water diversion.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	ER-LA-07
Outlet Creek HSA					
5 E	ER-OC-01	Prepare a technical assessment and prioritization of the Outlet Creek watershed, developing recommendations to restore long-term function.	Potential Lead: CDFG Others: NOAA Fisheries, RCD	Interim/ Ongoing	ER-OC-01
5 D	ER-OC-02	Work with the City of Willits in coho salmon recovery planning to:	Potential Lead: CDFG Others: City of Willits	Interim/ Ongoing	ER-OC-02
		a. Assess, prioritize, and treat barriers to passage;			
		b. Address water quality issues;			
		c. Modify facility maintenance practices as necessary; and			
		d. Evaluate land use planning and revise plans as appropriate.			
5 D	ER-OC-03	Upgrade the NCRWQCB basin plan to benefit coho salmon.	Potential Lead: NCRWQCB Others: CDFG	Interim	ER-OC-03
CAPE MENDOCINO HU					
E	CM-HU-01	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through:	Potential Lead: CDFG Others: California Conservation Corps, CDF, USFS, DPR, Landowners	Ongoing	CM-HU-01
		a. LWD placement;			
		b. Improvement of existing riparian zones through plantings, release of conifers, and manage of alders, blackberries, and other competitors; and			
		c. Bank stabilization and fencing projects.			
E	CM-HU-02	Assessment and prioritization of sources of sediment including roads.	Potential Lead: CDFG, Others: CDF, Landowners, CCC, NCRWQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-HU-02
D	CM-HU-03	Treat sources of sediment, including roads.	Potential Lead: CDFG, Others: CDF, Landowners, CCC, NCRWQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-HU-03

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
CAPE MENDOCINO HU (continued)						
E	CM-HU-04	Investigate feasibility of restoring estuarine function to maximize habitat for coho salmon.	Potential Lead: CDFG Others: Coastal Conservancy, NOAA Fisheries, Landowners	Interim/ Ongoing	CM-HU-04	
E	CM-HU-05	Prioritize and upgrade all county culverts identified as passage barriers.	Potential Lead: CDFG, County Others: Landowners	Interim/ Ongoing	CM-HU-05	
E	CM-HU-06	Conduct an inventory and prioritize for treatment coho salmon barriers other than county culverts.	Potential Lead: CDFG Others: Landowners, Coastal Commission, NOAA Fisheries	Interim	CM-HU-06	
Mattole River HSA – Southern Subbasin						
5	C	CM-MS-01	Promote outreach and education of water and conservation practices to improve stream surface flows and coho salmon habitat.	Potential Lead: Watershed Groups, Counties Others: CDFG, Landowners, NCRWQCB	Long-term	CM-MS-01
5	C	CM-MS-02	Protect the high quality habitat found in the Mattole River Headwaters and historic coho streams.	Potential Lead: CDFG, Landowners, CDF Others: Landowners, CDF	Interim/ Continual	CM-MS-02a
5	C	CM-MS-03	Protect high quality habitat found in the South Fork of Vanauken, Mill, Stanley, Thompson, Yew, and Lost Man creeks, recognizing current and continued land management practices by private landowners.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim/ Continual	CM-MS-02b
5	C	CM-MS-04	Promote a cooperative effort to establish monitoring stations at appropriate locations to monitor in-channel sediment (or turbidity) both in the lower basin and in the lower reaches of major tributaries.	Potential Lead: NCRWQCB, CDFG Others: CDF, Landowners, Watershed Groups, NOAA Fisheries, Counties	Long-term	CM-MS-03
5	C	CM-MS-05	Assess and prioritize sources of excess sediment.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim/ Continual	CM-MS-04
5	C	CM-MS-06	Treat sources of excess sediment.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim/ Continual	CM-MS-04b
5	D	CM-MS-07	Study herbicide use with respect to impacts on coho salmon.	Potential Lead: CDFG Others: Landowners, CDF, Caltrans, County	Interim	CM-MS-05
5	D	CM-MS-08	Urge lead agencies to consider herbicide application in CEQA and NEPA review.	Potential Lead: CDFG Others: Landowners, CDF, Caltrans, County	Interim	CM-MS-05b
5	D	CM-MS-09	Protect water quality from the ground application of pesticides following the NCRWQCB suggested BMPs.	Potential Lead: NCRWQCB Others: CDF, Watershed Groups, Landowners, Counties	Interim	CM-MS-06
5	D	CM-MS-10	Work with University of California Cooperative Extension (UCCE) specialists to monitor summer water and air temperatures and flow in cooperation with landowners using Department-accepted protocols.	Potential Lead: CDFG Others: UCCE, Landowners, Watershed Groups	Interim/ Ongoing	CM-MS-07

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Mattolle River HSA – Southern Subbasin (continued)						
5	D	CM-MS-11	Continue and expand on-going temperature monitoring efforts.	Potential Lead: CDFG Others: UCCE, Landowners, Watershed Groups	Interim/ Ongoing	CM-MS-07b
5	C	CM-MS-12	Request that Mendocino County evaluate new and existing for their impacts to coho salmon habitat.	Potential Lead: CDFG Others: Mendocino County, Landowners	Interim	CM-MS-08
5	C	CM-MS-13	Promote cluster development away from streams to protect coho salmon.	Potential Lead: Watershed Groups, Counties NCRWQCB Others: NCRWQCB	Long-term	CM-MS-09
5	C	CM-MS-14	Provide incentives to landowners to protect coho salmon habitat and reduce water use.	Potential Lead: Watershed Groups, Counties, NCRWQCB, CDFG	Long-term	CM-MS-10
5	C	CM-MS-15	Develop educational materials for landowners explaining how they can protect coho salmon.	Potential Lead: Watershed Groups Others: CDFG, Counties, NCRWQCB, NOAA Fisheries	Long-term	CM-MS-11
5	E	CM-MS-16	Begin the process of declaring the southern subbasin to be fully appropriated in the spring and summer.	Potential Lead: SWRCB Others: DWR, CDFG	Interim	CM-MS-12
5	D	CM-MS-17	Request that the SWRCB make the enforcement of water rights in this watershed a priority.	Potential Lead: CDFG Others: SWRCB	Interim	CM-MS-13
5	D	CM-MS-18	Pursue opportunities to acquire fee title, easement, and water rights from willing sellers.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	CM-MS-14
5	C	CM-MS-19	Plant trees appropriate to the location in riparian areas where conditions are suitable.	Potential Lead: Watershed Groups, Landowners, County Others: CDFG, CCC, NOAA Fisheries, CDF	Long-term	CM-MS-15
Mattolle River HSA – Western Subbasin						
5	D	CM-MW-01	Assess current levels of LWD in the western subbasin, and determine amount necessary for improved flushing, pooling and habitat conditions for coho salmon.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01
5	D	CM-MW-02	Facilitate immediate placement of LWD in areas where lacking.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01b
5	D	CM-MW-03	Develop and implement a plan for long-term recruitment of LWD.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01c
5	D	CM-MW-04	Cooperate in establishing monitoring stations at appropriate locations (e.g., Squaw, Honeydew, and Bear creeks) to monitor in-channel sediment and track aggraded reaches in the lower basin and in the lower reaches of major tributaries.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim/ Ongoing	CM-MW-02
5	C	CM-MW-05	Support the assessment, prioritization, and treatment of sources of excess sediment.	Potential Lead: CDFG, NOAA Fisheries Landowners, CDF, Watershed Groups	Interim/ Continual	CM-MW-03

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Mattole River HSA – Western Subbasin (continued)						
5	C	CM-MW-06	Monitor summer water and air temperatures using Department-accepted protocols. Continue temperature monitoring efforts in Stansberry, Mill (RM 2.8) Clear, Squaw, Woods, Honeydew Bear, North Fork Bear, South Fork Bear, Little Finley, Big Finley, and Noonung creeks, and expand efforts into other subbasin tributaries.	Potential Lead: Watershed Groups, CDFG Others: NCRWQCB	Interim/ Ongoing	CM-MW-04
5	C	CM-MW-07	Develop a plan to manage near-stream buffers to reduce the effects of solar radiation and to moderate air temperatures.	Potential Lead: CDFG Others: Landowners, RWQCB, Watershed Groups	Interim	CM-MW-05
5	C	CM-MW-08	Implement the plan to manage near-stream buffers to reduce the effects of solar radiation and to moderate air temperatures.	Potential Lead: CDFG Others: Landowners, RWQCB, Watershed Groups	Interim	CM-MW-05b
5	C	CM-MW-09	Assess and prioritize the actions needed for restoration and enhancement of riparian habitat.	Potential Lead: CDFG, Watershed Groups Others: Landowners, NOAA Fisheries	Interim	CM-MW-06
5	C	CM-MW-10	Implement the prioritized actions needed for restoration and enhancement of riparian habitat.	Potential Lead: CDFG, Watershed Groups Others: Landowners, NOAA Fisheries	Interim	CM-MW-06b
5	C	CM-MW-11	Recognize and support on-going efforts of landowners, BLM, and others to improve habitat conditions for coho salmon.	Potential Lead: Watershed Groups Others: CDFG, NOAA Fisheries	Interim/ Ongoing	CM-MW-07
5	D	CM-MW-12	Work with the SWRCB to expedite the processing of projects, including 1600 agreements, that are intended to reduce summer diversions.	Potential Lead: CDFG, NCRWQCB	Interim	CM-MW-08
5	C	CM-MW-13	Develop a public education program to raise awareness of the habitat needs of coho salmon and how the community, especially landowners, can improve coho salmon habitat.	Potential Lead: Watershed Groups Others: Landowners, CDFG, CCC, NOAA Fisheries, County	Interim/ Continual	CM-MW-09
5	D	CM-MW-14	Develop incentives for landowners and communities to reduce summer water withdrawals and enhance habitat.	Potential Lead: Watershed Groups Others: NCRWQCB, Counties, NOAA Fisheries	Interim	CM-MW-10
5	C	CM-MW-15	Develop programs to support continued land-use patterns and discourage conversions and subdivisions.	Potential Lead: Counties, NCRWQCB Others: CDFG, NOAA Fisheries	Long-term	CM-MW-11
5	E	CM-MW-16	Support a plan for mapping unstable soils and use of the information to guide land-use decisions, road design, and other activities that can increase erosion.	Potential Lead: NCRWQCB Others: CDF, CDFG, CGS, Watershed Groups, NOAA Fisheries	Interim	CM-MW-12
Mattole River HSA – Northern Subbasin						
5	C	CM-MN-01	Use tree planting and other vegetation management to improve canopy cover, especially in Conklin, Oil, Green Ridge, Devils, and Rattlesnake creeks.	Potential Lead: Watershed Groups Others: Landowners, CDFG, CCC, NOAA Fisheries, County	Long-term	CM-MN-01

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Mattole River HSA – Northern Subbasin (continued)						
5	C	CM-MN-02	Through cooperative efforts, treat stream-bank erosion sites to reduce sediment yield, especially in Sulphur, Conklin, and Oil creeks and the lower reaches of the North Fork Mattole River.	Potential Lead: Watershed Groups Others: Landowners, NCRWQCB, CDFG, CDF	Long-term	CM-MN-02
5	D	CM-MN-03	Due to high incidence of unstable slopes in the northern subbasin, base future permitting of sub-division development proposals on existing county-imposed forty-acre minimum parcel sub-division ordinances.	Potential Lead: County Others: NCRWQCB	Interim	CM-MN-03
Mattole River HSA – Eastern Subbasin						
5	E	CM-ME-01	Continue to conduct road and erosion assessments, especially in Middle, Westlund, Gilham, Sholes, Blue Slide, and Fire creeks.	Potential Lead: CDFG Others: CDF, Landowners, CCC, NCR-WQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-ME-01
5	D	CM-ME-02	Continue to implement road and erosion assessments, especially in Middle, Westlund, Gilham, Sholes, Blue Slide, and Fire creeks.	Potential Lead: CDFG Others: CDF, Landowners, CCC, NCR-WQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-ME-01b
5	C	CM-ME-03	Use tree planting and other vegetation management to improve canopy cover, especially in Dry and Blue Slide creeks.	Potential Lead: CDFG Others: Landowners, CCC, Watershed Groups, NOAA Fisheries, CDF, County	Long-term	CM-ME-02
5	C	CM-ME-04	Through cooperative efforts, reduce sediment yield at stream-bank erosion sites, especially in Middle, Westlund, Gilham, North Fork Fourmile, Sholes, Harrow, Little Grindstone, Grindstone, Eubank, and McKee creeks.	Potential Lead: Watershed Groups Others: Landowners, NCRWQCB, CDFG, CDF	Long-term	CM-ME-03

TABLE 9-3: Implementation schedule for the CCC Coho ESU

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
MENDOCINO COAST HU						
E	MC-HU-01	Update general plans to include measures to protect coho salmon.	Potential Lead: Counties Others: Watershed Groups, CDFG, NOAA Fisheries	Long-term	MC-HU-01	
C	MC-HU-02	Provide technical and staff support to update general plans to include measures to protect coho salmon.	Potential Lead: CDFG, NOAA Fisheries, SWRCB, RWQCBs	Long-term	MU-HU-01b	
D	MC-HU-03	Where development would adversely affect coho salmon, limit development in the 100-year flood plain.	Potential Lead: Counties Others: CDFG, NOAA Fisheries, USACE	Interim/ Continual	MC-HU-03	
C	MC-HU-04	Recommend Mendocino and Sonoma counties to adopt county grading ordinances.	Potential Lead: CDFG	Long-term	MC-HU-04	
C	MC-HU-05	Adopt county grading ordinances.	Potential Lead: Mendocino and Sonoma Counties	Long-term	MC-HU-04b	
C	MC-HU-06	Recommend to Mendocino County to expand the CEQA checklist to include coho salmon.	Potential Lead: CDFG	Interim	MC-HU-05	
C	MC-HU-07	Include coho salmon in CEQA checklist.	Potential Lead: Mendocino County	Interim	MC-HU-05b	
E	MC-HU-08	Maintain current LWD, boulders, and other structure-providing features to maintain current stream complexity and pool frequency and depth.	Potential Lead: Landowners, Counties Others: CDFG, NOAA Fisheries, Watershed Groups	Interim/ Continual	MC-HU-06	
D	MC-HU-09	Install LWD, boulders, and other features to increase stream complexity and improve pool frequency and depth.	Potential Lead: Landowners, Counties, CDFG, NOAA Fisheries, Watershed Groups	Interim/ Continual	MC-HU-06b	
D	MC-HU-10	Restore riparian vegetation and promote conifer recruitment for shade and for LWD recruitment to increase stream complexity.	Potential Lead: Landowners, Counties, CDFG, NOAA Fisheries, Watershed Groups	Interim/ Continual	MC-HU-06c	
E	MC-HU-11	Assess, prioritize, and treat sediment sources at an HSA level.	Potential Lead: CDFG, Others: Watershed Groups, Landowners, NOAA Fisheries, NCRWQCB, CDF, Counties, BLM, DPR, RCDs, CCC	Interim/ Ongoing	MC-HU-07	
E	MC-HU-12	Determine site-specific recommendations, including incentives, to remedy high temperatures.	Potential Lead: CDFG, NOAA Fisheries Others: Landowners, Watershed Groups, Counties	Long-term	MC-HU-08	
D	MC-HU-13	Implement recommendations to remedy high temperature.	Potential Lead: Landowners, Counties, Watershed Groups Others: CDFG, NOAA Fisheries	Long-term	MC-HU-08b	
E	MC-HU-14	Map unstable soils.	Potential Lead: Counties, CDFG Others: Watershed Groups, Landowners, NOAA Fisheries, NCRWQCB, CDF, BLM, RCDs	Long-term	MC-HU-09	

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
MENDOCINO COAST HU (continued)					
C	MC-HU-15	Use soil mapping to guide land-use decisions, road design, THPs, and other activities that can promote erosion.	Potential Lead: Counties, Counties, CDF, RWQCB, CDFG, NOAA Fisheries, Landowners Others: Watershed Groups, BLM, RCDs	Long-term	MC-HU-09b
C	MC-HU-16	Provide education and training on water diversion practices.	Potential Lead: SWRCB Others: CDFG	Interim/ Continual	MC-HU-10
C	MC-HU-17	Ensure compliance with pertinent regulations on water diversion practices (e.g., FGC § 1600 <i>et seq.</i> , FPR § 916.9, California water rights law).	Potential Lead: SWRCB Others: CDFG	Interim/ Continual	MC-HU-10b
E	MC-HU-18	Continue to treat existing upslope sediment to improve pool frequency and depth and decrease sediment load.	Potential Lead: CDFG Others: Watershed Groups, Landowners, NOAA Fisheries, NCRWQCB, CDF, Counties BLM, DPR, RCDs, CCC	Interim/ Ongoing	MC-HU-11
E	MC-HU-19	Avoid or minimize land fragmentation or conversion to more intensive uses to maintain pool frequency and depth.	Potential Lead: Counties, CDFG Others: Watershed Groups, Landowners, CDFG	Long-term/ Continual	MC-HU-11b
C	MC-HU-20	Cooperate with and provide incentives to Landowners to maintain road and trail closures to be effective against trespass and discourage poaching of coho salmon.	Potential Lead: CDFG, NOAA Fisheries Others: Counties, Landowners, DPR, Public	Interim/ Continual	MC-HU-12
C	MC-HU-21	Monitor road closures to discourage poaching of coho salmon.	Potential Lead: County law enforcement, CHP, CDFG, NOAA Fisheries Others: Counties, Landowners, DPR, Watershed Groups, Public	Interim/ Continual	MC-HU-12b
C	MC-HU-22	Repair defective or damaged roads to discourage poaching of coho salmon.	Potential Lead: Counties, Landowners, DPR Others: CDFG, NOAA Fisheries	Interim/ Continual	MC-HU-12c
D	MC-HU-23	Promote CalTIP, especially with regard to coho salmon spawning sites, to discourage poaching of coho salmon.	Potential Lead: County law enforcement, CHP, CDFG, NOAA Fisheries Others: Counties, Landowners, DPR, Watershed Groups, Public	Interim/ Continual	MC-HU-12d
E	MC-HU-24	Investigate the desirability and feasibility of beaver reintroductions to promote channel complexity and provide rearing habitat.	Potential Lead: CDFG, NOAA Fisheries Others: Academia	Long-term	MC-HU-13
C	MC-HU-25	If appropriate, reintroduce beavers to promote channel complexity and provide rearing habitat.	Potential Lead: CDFG, NOAA Fisheries Others: Counties, Landowners, Watershed Groups	Long-term/ Continual	MC-HU-13b
C	MC-HU-26	Increase efforts to control alders, blackberries, and other competitors to restore LWD recruitment and shade.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, Counties, Landowners, DPR, RCDs, CCC, Watershed Groups	Interim/ Ongoing	MC-HU-14

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
MENDOCINO COAST HU (continued)						
C	MC-HU-27		Provide incentives to landowners, such as technical support, to increase efforts to restore LWD recruitment and shade.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, Counties, Landowners, DPR, RCDs, CCC, Watershed Groups	Interim/ Ongoing	MC-HU-14b
D	MC-HU-28		Avoid or minimize increases in water use to maintain or improve instream flows.	Potential Lead: SWRCB, Counties, Landowners Others: CDFG, NOAA Fisheries, RCDs	Interim/ Continual	MC-HU-15
D	MC-HU-29		Provide incentives to remove or convert direct diversions to off-stream storage to maintain or improve instream flow.	Potential Lead: SWRCB, CDFG, NOAA Fisheries, Counties Others: RCDs, Watershed Groups	Interim/ Continual	MC-HU-15b
C	MC-HU-30		Restrict the season of diversion to December through March to maintain or improve instream flows.	Potential Lead: SWRCB, Counties, Landowners, CDFG Others: NOAA Fisheries, RCDs	Interim/ Continual	MC-HU-15c
E	MC-HU-31		Cooperatively evaluate the rate, location, and volume of water drafting for dust control in streams or tributaries and where appropriate, minimize water withdrawals that could impact coho salmon.	Potential Lead: CDF, SWRCB, CDFG Others: Landowners, NOAA Fisheries, Caltrans, RWQCBs	Long-term/ Continual	MC-HU-16
D	MC-HU-32		When feasible, use alternatives to water as a dust palliative that are consistent with maintaining or improving water quality. Consider existing regulations or other mechanisms when evaluating alternative to water as a dust palliative (including EPA certified compounds), that are consistent with maintaining or improving water quality.	Potential Lead: Counties, Landowners	Long-term/ Continual	MC-HU-16b
D	MC-HU-33		Maintain or re-establish geographic distribution of coho salmon by allocating substantial improvement efforts towards identified biological refugia, spawning coho salmon populations, suitable habitat accessible to coho salmon.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, Counties, Landowners, DPR, RCDs, CCC, Watershed Groups	Long-term	MC-HU-17
C	MC-HU-34		Coordinate with RWQCB to implement water quality monitoring of coho salmon habitat restoration projects (RWQCB 401, USACE 404, NOAA Fisheries, and USFWS permitting).	Potential Lead: CDFG Others: SWQCB, USACE, NOAA Fisheries, USFWS	Interim (Spring 2003-Spring 2004)	MC-HU-18
C	MC-HU-35		Streamline permitting of coho salmon habitat restoration projects (RWQCB 401, USACE 404, NOAA Fisheries, and USFWS permitting).	Potential Lead: CDFG Others: SWQCB, USACE, NOAA Fisheries, USFWS	Interim (Spring 2003-Spring 2004)	MC-HU-18b
E	MC-HU-36		Encourage funding authorities to allocate adequate resources to prioritize and upgrade culverts to provide coho salmon passage within the range of coho salmon to pass 100-year flows and the expected debris loads.	Potential Lead: Federal, State, Local, and Tribal Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Interim	MC-HU-19
E	MC-HU-37		Adequately fund prioritization and upgrading of culverts to provide coho salmon passage within the range of coho salmon to pass 100-year flows and the expected debris loads.	Potential Lead: CDFG, NOAA Fisheries, Counties	Interim/ Continual	MC-HU-19b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
MENDOCINO COAST HU (continued)						
E	MC-HU-38	Identify areas of increased risk of mass wasting and fine sediment loads to decrease sediment from transportation projects and land management activities.	Potential Lead: CDFG, NCRWQCB, Caltrans, Counties, Landowners Others: Watershed Groups, CDF, CCC	Potential Lead: CDFG, NCRWQCB, Caltrans, Counties, Landowners Others: Watershed Groups, CDF, CCC	Interim/ Continual	MC-HU-20
D	MC-HU-39	Implement appropriate measures or mitigation for mass wasting.	Potential Lead: CDFG, NCRWQCB, Caltrans, Counties, Landowners Others: Watershed Groups, CDF, CCC	Potential Lead: CDFG, NCRWQCB, Caltrans, Counties, Landowners Others: Watershed Groups, CDF, CCC	Interim/ Continual	MC-HU-20b
E	MC-HU-40	Abandon riparian road systems and/or upgrade roads and skid trails that deliver sediment to adjacent watercourses to decrease fine sediment loads.	Potential Lead: Counties, NCRWQCB, CDFG Others: Landowners, Counties, Caltrans, Watershed Groups, RCDs, CDF, CCC, DPR	Potential Lead: Counties, NCRWQCB, CDFG Others: Landowners, Counties, Caltrans, Watershed Groups, RCDs, CDF, CCC, DPR	Interim/ Continual	MC-HU-21
E	MC-HU-41	Limit winter use of unsurfaced roads and recreational trails by unauthorized and impacting uses to decrease fine sediment loads.	Potential Lead: Counties, NCRWQCB, CDFG Others: Landowners, Counties, Caltrans, Watershed Groups, RCDs, CDF, CCC, DPR	Potential Lead: Counties, NCRWQCB, CDFG Others: Landowners, Counties, Caltrans, Watershed Groups, RCDs, CDF, CCC, DPR	Interim/ Continual	MC-HU-21b
E	MC-HU-42	Minimize the density of road and trail crossings of watercourses.	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Interim/ Continual	MC-HU-21c
E	MC-HU-43	Wherever feasible, out-slope roads with rolling dips to decrease fine sediment loads.	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Interim/ Continual	MC-HU-21d
E	MC-HU-44	Identify and modify road maintenance activities that generate fine sediment loads to decrease fine sediment loads.	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Potential Lead: Counties, Landowners, Caltrans, CDF Others: CDFG, NCRWQCB, Watershed Groups, RCDs, CCC, DPR	Interim/ Continual	MC-HU-21e
C	MC-HU-45	Develop erosion control projects similar to the North Fork Ten Mile River erosion control plan.	Potential Lead: CDFG, Trout Unlimited, NCRWQCB, NOAA Fisheries, Mendocino County, Landowners	Potential Lead: CDFG, Trout Unlimited, NCRWQCB, NOAA Fisheries, Mendocino County, Landowners	Interim	MC-HU-22
Albian River HSA						
5	C	MC-AR-01	Place instream structures to improve gravel retention and habitat complexity.	Potential Lead: CDFG Others: Landowners, CCC, CDF, Watershed Groups, Mendocino County, RCDs	Interim/ Continual	MC-AR-01
5	C	MC-AR-02	Provide technical assistance and incentives to landowners in developing and implementing sediment reduction plans to meet requirements of the CWA TMDL, making watersheds with an implementation schedule the highest priority.	Potential Lead: NCRWQCB Others: CDFG, EPA, NOAA Fisheries, RCDs, Mendocino County, CDF, DPR	Interim	MC-AR-02
5	C	MC-AR-03	Conduct collaborative evaluations of priorities for treatment of coho salmon passage barriers, such as the Fish Passage Forum.	Potential Lead: CDFG, NOAA Fisheries, Caltrans, Mendocino County Landowners, Watershed Groups.	Interim/ Continual	MC-AR-03

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Albion River HSA (continued)						
5	C	MC-AR-04	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: W/CB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-AR-7
5	C	MC-AR-05	Encourage when necessary and appropriate restricted access to unpaved roads in winter to reduce road degradation and sediment release. Where restricting winter access to unpaved roads is not feasible, encourage measures such as rocking to prevent sediment from reaching coho salmon streams.	Potential Lead: CDF, CDFG, USFS, Counties, Landowners	Interim/ Continual	MC-AR-11
5	D	MC-AR-06	Conduct comprehensive subbasin erosion control “storm proofing,” combined with installation of LWD into streams.	Potential Lead: CDFG, Mendocino County, RCD, Landowners Others: CDF, CCC, DPR	Interim	MC-AR-12
5	E	MC-AR-07	Modify stream barriers to allow coho salmon passage while maintaining LWD.	Potential Lead: CDFG, Landowners, RCD Others: Mendocino County, CCC, DPR	Interim	MC-AR-13
Big River HSA						
5	E	MC-BR-01	Coordinate and make recommendations needed to implement provisions of the FGC § 1600.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01
5	E	MC-BR-02	Implement recommendations on provisions of the FGC § 1600.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01b
5	E	MC-BR-03	Identify actions to improve coordination between the agencies and others to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01c
5	E	MC-BR-04	Implement actions to address season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and their habitat including spawning gravel and natural hydrograph, and avoidance of adverse impacts caused by water diversion.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01d
5	E	MC-BR-05	Assess and map water diversions.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01e
5	E	MC-BR-06	Determine and monitor 1600 compliance related to water diversions.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01f
5	E	MC-BR-07	Evaluate requests for on-stream dams on streams with coho salmon above coho salmon migratory reaches for the effects on the natural hydrograph and the effects on the supply of spawning gravel for recruitment downstream.	Potential Lead: SWRCB Others: CDFG, NOAA Fisheries, County, Landowners	Interim/ Continual	MC-BR-01g

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Garcia River HSA					
4 D	MC-GA-01	Establish connectivity of North Fork Garcia River to the mainstem.	Potential Lead: CDFG, Counties, Landowners Others: NOAA Fisheries	Long-term	MC-GA-02
4 C	MC-GA-02	Provide technical assistance and incentives to Garcia River Landowners for developing and implementing sediment reduction plans to meet the requirements of the CWA TMDL.	Potential Lead: NCRWQCB Others: CDFG, EPA, NOAA Fisheries, RCDs, Mendocino County, CDF	Interim	MC-GA-05
4 C	MC-GA-03	Utilize as a model for erosion reduction and LWD placement the comprehensive approach practiced in the South Fork of the Garcia River.	Potential Lead: CDF, NCRQCB, CDFG	Interim	MC-GA-06
4 C	MC-GA-04	Investigate stream nutrient enrichment and cycling needs for coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Academia Others: Counties, Landowners, Watershed Groups	Interim	MC-GA-07
4 E	MC-GA-05	Apply the Garcia River Estuary Enhancement Feasibility Study Report to investigate coho salmon in the Garcia River estuary, as well as new information, to consider restoring estuary functions that would benefit coho salmon.	Potential Lead: CDFG, NOAA Fisheries Others: Mendocino County, Landowners, RCD, Academia	Interim	MC-GA-08
4 D	MC-GA-06	If appropriate, restore estuary function to benefit coho salmon.	Potential Lead: Mendocino County, CDFG	Long-term	MC-GA-08b
4 C	MC-GA-07	Coordinate LWD placement in streams with logging operations and road upgrades to maximize size, quality, and efficiency of effort.	Potential Lead: CDF Others: Landowners, CDFG, NOAA Fisheries, Counties, Caltrans	Interim	MC-GA-09
4 D	MC-GA-08	Maintain Hathaway Creek, North Fork Garcia, Rolling Brook, Mill Creek (lower Garcia River), South Fork Garcia, Signal Mill Creek (upper Garcia River) to continue to provide coldwater input to the mainstem Garcia.	Potential Lead: CDF Others: Landowners, CDFG, NOAA Fisheries, Counties, Caltrans	Interim/ Continual	MC-GA-11
4 C	MC-GA-09	Plant conifers in riparian zone of Blue Waterhole, Inman and Pardaloe creeks to reduce instream temperatures and inputs into the mainstem and conifer LWD recruitment.	Potential Lead: Landowners Others: CDF, CDFG, RCD	Interim	MC-GA-12
4 C	MC-GA-10	Encourage, when necessary and appropriate, restricted access to unpaved roads in winter to reduce road degradation and sediment release. Where restricting winter access to unpaved roads is not feasible, encourage measures such as rockling to prevent sediment from reaching coho salmon streams.	Potential Lead: Mendocino County, CDF	Interim/ Continual	MC-GA-13
4 D	MC-GA-11	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: WCB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-GA-14
4 D	MC-GA-12	Excavate a geomorphically designed stream channel in the lower North Fork Garcia River to rectify subsurface flow during summer months and prevent coho salmon stranding.	Potential Lead: CDFG, NOAA Fisheries Others: Mendocino County, Watershed Groups	Long-term	MC-GA-16
4 E	MC-GA-13	Rescue juvenile coho salmon until subsurface summer flows are rectified.	Potential Lead: CDFG, NOAA Fisheries Others: Mendocino County, Watershed Groups	Interim	MC-GA-16b

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Garcia River HSA (continued)						
4	C	MC-GA-14	Work with landowners to plant conifers in the lower mainstem Garcia River from Eureka Hill road Bridge to Windy Hollow road with the goal of reducing stream temperature, providing bank stability and long-term LWD.	Potential Lead: CDFG, NOAA Fisheries, Landowners Others: Mendocino County, Watershed Groups	Interim/ Continual	MC-GA-17
4	E	MC-GA-15	Evaluate the value to coho salmon of projects to open logjam migration barriers in the North Fork, South Fork, and Fleming Creek.	Potential Lead: CDFG, NOAA Fisheries Others: Watershed Groups	Interim	MC-GA-18
4	D	MC-GA-16	If appropriate, open logjam barriers to coho salmon migration in the North Fork, South Fork, and Fleming Creek.	Potential Lead: CDFG, NOAA Fisheries Others: Watershed Groups	Interim	MC-GA-18b
4	C	MC-GA-17	Complete the remaining 25% of erosion control sites, identified in the South Fork Garcia River by the Trout Unlimited North Coast Coho Salmon Project.	Potential Lead: CDFG, Landowners, Watershed Groups	Long-term	MC-GA-19
4	C	MC-GA-18	Where appropriate and with willing landowners, place LWD in Inman Creek, South Fork Garcia River, Signal Creek, and North Fork Garcia River.	Potential Lead: CDFG, NOAA Fisheries, Landowners, Watershed Groups Others: Counties	Interim/ Continual	MC-GA-21
4	C	MC-GA-19	Where appropriate and with willing landowners, plant redwood trees in the lower seven miles of the Garcia River mainstem between Eureka Hill road and Windy Hollow road to provide for LWD recruitment and bank stability and to reduce instream temperatures.	Potential Lead: CDFG, NOAA Fisheries, Landowners, Watershed Groups Others: Counties	Interim/ Continual	MC-GA-22
Navarro River HSA						
4	C	MC-NA-01	Investigate stream nutrient enrichment and cycling needs for coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Academia	Interim	MC-NA-03
4	D	MC-NA-02	Pay particular attention to Implementing actions regarding LWD and shade that are suggested at the HU level.	Potential Lead: CDFG Others: CDF, NOAA Fisheries, Mendocino County, Landowners, CCC, RCDs	Interim	MC-NA-04
4	C	MC-NA-03	Prioritize enforcement of pertinent laws concerning illegal and unpermitted dams and diversions.	Potential Lead: SWRCB, CDFG, NOAA Fisheries	Interim/ Continual	MC-NA-06
4	C	MC-NA-04	Conserve water by providing land-owners education, incentives, and technical assistance.	Potential Lead: SWRCB, CDFG, NOAA Fisheries Others: RWQCBs, Watershed Groups, RCDs, UCCE	Ongoing/ Continual	MC-NA-06b
4	E	MC-NA-05	Implement comprehensive, subbasin-wide erosion control and LWD installation for Flynn, Dutch Henry, John Smith, Minnie, Horse Camp and German creeks such as is being implemented on Little North Fork.	Potential Lead: MRC, CDFG Others: NOAA Fisheries, CDF, NCRWQCB	Interim	MC-NA-07
4	C	MC-NA-06	Provide technical assistance and incentives to Navarro River landowners for developing and implementing sediment reduction plans to meet the requirements of the CWA TMDL.	Potential Lead: NCRWQCB Others: CDFG, EPA, NOAA Fisheries, RCDs, Mendocino County, CDF	Interim	MC-NA-08
4	C	MC-NA-07	Coordinate LWD placement in streams with logging operations and road upgrades to maximize size, quality, and efficiency of effort.	Potential Lead: CDF Others: CDFG, Landowners, NOAA Fisheries, Mendocino County, Caltrans	Interim/ Continual	MC-NA-09

HSA PRIORITY	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Navarro River HSA (continued)					
4 C	MC-NA-08	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: WCB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-NA-10
4 C	MC-NA-09	Where restricting winter access to unpaved roads is not feasible, encourage measures such as rockling to prevent sediment from reaching coho salmon streams.	Potential Lead: CDF, CDFG, USFS, Counties, Landowners	Interim/ Continual	MC-NA-11
Noyo River HSA					
4 E	MC-NO-01	Investigate the role of the Pudding Creek Dam impoundment in coho migration and freshwater survival rate.	Potential Lead: CDFG Others: NOAA Fisheries, Academia, Landowners	Interim	MC-NO-02
4 C	MC-NO-02	If appropriate, repair the Pudding Creek Dam.	Potential Lead: CDFG Others: NOAA Fisheries, Academia, Landowner	Long-term	MC-NO-02b
4 C	MC-NO-03	Implement actions of a sediment reduction plan to improve water quality.	Potential Lead: CDFG, NOAA Fisheries Others: Mendocino County, NCRWCB	Interim	MC-NO-04
4 E	MC-NO-04	Fund activities to address barriers to coho salmon passage on the California Western Railway right-of-way.	Potential Lead: CDFG Others: NOAA Fisheries, Mendocino County	Interim	MC-NO-05
4 D	MC-NO-05	Remove barriers to coho salmon passage on the California Western Railway right-of-way.	Potential Lead: CDFG, NOAA Fisheries, Mendocino County	Interim	MC-NO-05b
4 C	MC-NO-06	Evaluate the biological justification for the egg-taking station on the South Fork Noyo River.	Potential Lead: CDFG NOAA Fisheries Others: Academia	Interim	MC-NO-06
Ten Mile River HSA					
4 E	MC-TM-01	Complete erosion control on the North Fork Ten Mile River.	Potential Lead: Hawthorne-Campbell Company, CDFG Others: Trout Unlimited, NCRWQCB, NOAA Fisheries, Mendocino County, Landowners	Interim	MC-TM-01
4 C	MC-TM-02	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: WCB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-TM-02
4 C	MC-TM-03	Where restricting winter access to unpaved roads is not feasible, encourage measures such as rockling to prevent sediment from reaching coho salmon streams.	Potential Lead: CDF, CDFG, USFS, Counties, Landowners	Interim/ Continual	MC-TM-03
4 C	MC-TM-04	Provide technical assistance and incentives to Ten Mile River landowners for developing and implementing sediment reduction plans to meet the requirements of the CWA TMDL.	Potential Lead: NCRWQCB Others: CDFG, EPA, NOAA Fisheries, RCDs, Mendocino County, CDF	Interim	MC-TM-05

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Ten Mile River HSA (continued)						
4	C	MC-TM-05	Coordinate LWD placement in streams with logging operations and road upgrades to maximize the size, quality, and efficiency of effort.	Potential Lead: CDF Others: Landowners, CDFG, NOAA Fisheries, Counties	Interim/ Continual	MC-TM-06
Gualala River HSA						
2	E	MC-GU-01	Complete comprehensive assessment/implementation of erosion control measures in the entire North Fork River basin.	Potential Lead: CDFG, NCRWQCB Others: Watershed Groups, Landowners	Interim/ Ongoing	MC-GU-02
2	E	MC-GU-02	Enforce existing by-pass flow permit conditions of water diversions on the North Fork Gualala River to protect coldwater input to lower mainstem and estuary.	Potential Lead: SWRCB, CDFG	Interim	MC-GU-03
2	C	MC-GU-03	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: WCB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-GU-04
2	C	MC-GU-04	Coordinate LWD placement in streams with logging operations and road upgrades to maximize size, quality, and efficiency of effort.	Potential Lead: CDF Others: CDFG, NOAA Fisheries, Counties, Caltrans	Interim/ Continual	MC-GU-05
2	C	MC-GU-05	Explore acquisition or conservation easements from willing land-owners of sections of stands of old-growth Redwood along Haupt Creek.	Potential Lead: WCB, CDFG Others: Mendocino County, Sonoma County	Interim	MC-GU-07
2	C	MC-GU-06	If appropriate and from willing land-owners, acquire fee-title or conservation easement to sections of stands of old-growth Redwood along Haupt Creek.	Potential Lead: WCB Others: Landowners, CDFG, Mendocino County, Sonoma County	Long-term	MC-GU-07b
2	D	MC-GU-07	Restore all tributaries that historically contained coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Landowners Others: Mendocino County, Sonoma County	Interim/ Continual	MC-GU-09
2	C	MC-GU-08	Enforce all pertinent laws relating to summer dams and water diversions to provide adequate year round flows and coho salmon passage.	Potential Lead: SWRCB, CDFG Others: NOAA Fisheries, RWQCB, Mendocino County, Sonoma County	Interim	MC-GU-11
2	C	MC-GU-09	Study baseline flow of Gualala River basin.	Potential Lead: NOAA Fisheries, RWQCB, Mendocino County, Sonoma County Watershed Groups	Interim	MC-GU-11b
2	C	MC-GU-10	Where necessary and with willing landowners, protect riparian vegetation buffer zones through conservation planning, acquisition, and easements.	Potential Lead: WCB, CDFG, NOAA Fisheries Others: Mendocino County, RCDs, Watershed Groups, Counties	Interim/ Ongoing	MC-GU-12
2	E	MC-GU-11	Investigate effects to coho salmon of conversion of timberland and oak woodlands in the Gualala River.	Potential Lead: CDFG, NOAA Fisheries Others: CDF, Mendocino County, Sonoma County Watershed Groups	Interim	MC-GU-13

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
RUSSIAN RIVER HU					
C	RR-HU-01	Upgrade the Russian River Basin Plan to benefit coho salmon.	Potential Lead: RWQCB Others: CDFG, NOAA Fisheries	Interim	RR-HU-02
E	RR-HU-02	Identify water diverters.	Potential Lead: RWQCB Others: SWRCB, Counties	Interim	RR-HU-03
C	RR-HU-03	Review, and modify if necessary, water use based on the needs of coho salmon and authorized diverters.	Potential Lead: RWQCB, SWRCB Others: CDFG, NOAA Fisheries, Counties, Landowners	Long-term	RR-HU-03b
E	RR-HU-04	Assess, prioritize, and develop plans to treat barriers to coho salmon passage in all HSAs.	Potential Lead: CDFG, Counties Others: NOAA Fisheries, USFWS, Landowners	Interim	RR-HU-04
D	RR-HU-05	Treat barriers to coho salmon passage.	Potential Lead: CDFG, Counties Others: NOAA Fisheries, USFWS, Landowners	Long-term	RR-HU-04b
E	RR-HU-06	Assess riparian canopy and impacts of exotic vegetation (e.g., <i>Aruno donax</i>), prioritize, and develop riparian habitat reclamation and enhancement programs.	Potential Lead: RCDs, CDFG Others: Landowners, Counties	Interim/ Continual	RR-HU-06
C	RR-HU-07	If appropriate, control exotic vegetation (especially <i>Aruno donax</i>).	Potential Lead: RCDs, CDFG Others: Landowners, Counties	Long-term	RR-HU-06b
C	RR-HU-08	Restore and enhance priority riparian habitat.	Potential Lead: RCDs, CDFG Others: Landowners, Counties	Long-term	RR-HU-06c
C	RR-HU-09	Implement the Sotoyome Resource Conservation District's Fish Friendly Farming Program within Sonoma and Mendocino counties.	Potential Lead: Sotoyome RCD Others: Landowners, CDFG, Counties	Interim/ Continual	RR-HU-07
E	RR-HU-10	Continue genetic analysis of source stocks for coho salmon broodstock.	Potential Lead: Bodega Marine Lab, CDFG Others: NOAA Fisheries	Interim/ Ongoing	RR-HU-08
D	RR-HU-11	Stock first priority streams missing coho salmon, including Felta and Mill creeks (tributary to Dry Creek west of Healdsburg), Freezout, Willow and Sheephouse creeks (near Duncans Mills), and Ward Creek (tributary to Austin Creek). Identify additional streams that may be suitable for stocking as restoration occurs	Potential Lead: CDFG Others: NOAA Fisheries, Watershed Groups	Interim	RR-HU-08b
E	RR-HU-12	Identify additional streams that may be suitable for stocking coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, Academia	Interim	RR-HU-08c
C	RR-HU-13	Develop and implement a monitoring and evaluation program to adaptively manage the coho salmon broodstock program and meet high and medium priority monitoring objectives as outlined in the coho salmon HGMP.	Potential Lead: CDFG Others: NOAA Fisheries, Academia	Interim/ Continual	RR-HU-08d
C	RR-HU-14	Develop, implement, and evaluate experimental release protocols for the captive broodstock program.	Potential Lead: CDFG Others: NOAA Fisheries, Academia	Interim/ Continual	RR-HU-08e

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
RUSSIAN RIVER HU (continued)					
C	RR-HU-15	Review and revise long-term hatchery program goals based on results of the monitoring and evaluation program implemented in the experimental captive broodstock program.	Potential Lead: CDFG Others: NOAA Fisheries, Academia	Long-term	RR-HU-08f
C	RR-HU-16	Develop and implement protocols for controlling Pierce's Disease to maintain a native riparian corridor.	Potential Lead: RCDs, Counties Others: Landowners, CDFG, NCRWQCB, NOAA Fisheries, USFWS	Interim/ Continual	RR-HU-09
C	RR-HU-17	Develop an outreach program for controlling Pierce's Disease.	Potential Lead: RCDs, Counties Others: Landowners, CDFG, NCRWQCB, NOAA Fisheries, USFWS	Interim/ Continual	RR-HU-09b
E	RR-HU-18	Evaluate recommendations to offset impacts from county policies and operations, as developed by the FishNet 4C program in their report, Effects of County Land Use Policies and Management Practices on Anadromous Salmonids and Their Habitat.	Potential Lead: Sonoma County, Landowners Others: CDFG, NCRWQCB, NOAA Fisheries, Landowners	Interim	RR-HU-10
C	RR-HU-19	Implement appropriate recommendations to offset impacts from county policies and operations, as developed by the FishNet program.	Potential Lead: Sonoma County, Landowners Others: CDFG, NCRWQCB, NOAA Fisheries	Long-term	RR-HU-10b
E	RR-HU-20	Evaluate recommendations to offset impacts from county policies and operations, as developed by the Five County effort.	Potential Lead: Mendocino County Others: CDFG, NCRWQCB, NOAA Fisheries, Landowners	Interim	RR-HU-10c
C	RR-HU-21	Implement appropriate recommendations to offset impacts from county policies and operations, as developed by the Five County effort.	Potential Lead: Mendocino County, Landowners Others: CDFG, NCRWQCB, NOAA Fisheries	Long-term	RR-HU-10d
C	RR-HU-22	Develop a grading ordinance and grading and erosion control standards to minimize sediment impacts to coho salmon habitat.	Potential Lead: Sonoma and Mendocino Counties Others: Caltrans, CDFG, NOAA Fisheries	Long-term	RR-HU-11
E	RR-HU-23	Restore coho salmon passage at county structures on all streams inhabited by coho salmon, as identified in the Russian River Fish Passage Assessment report.	Potential Lead: Counties Others: CDFG, NOAA Fisheries, Landowners	Interim	RR-HU-12
E	RR-HU-24	Expand coho salmon passage barrier inventories as needed to use a comprehensive watershed approach improving coho salmon passage.	Potential Lead: Counties Others: CDFG, NOAA Fisheries, Landowners	Interim	RR-HU-12b
C	RR-HU-25	Integrate coho salmon passage projects at county facilities with coho salmon passage improvements involving other Landowners, throughout targeted coho salmon watersheds.	Potential Lead: Counties, CDFG, NOAA Fisheries, Watershed Groups Others: Landowners	Interim	RR-HU-12c
E	RR-HU-26	Review and, if appropriate, approve Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004).	Potential Lead: State Agencies	Interim	RR-HU-13

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
RUSSIAN RIVER HU (continued)					
C	RR-HU-27	Implement any best management practices pertinent to coho salmon recovery in Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004).	Potential Lead: Sonoma County Public Works and Parks	Long-term	RR-HU-13b
E	RR-HU-28	Review the Five County Roads manual.	Potential Lead: State agencies	Interim	RR-HU-13c
C	RR-HU-29	Implement any practices pertinent to coho salmon recovery in the Five County Roads manual.	Potential Lead: Mendocino County	Long-term	RR-HU-13d
D	RR-HU-30	Reduce native riparian vegetation clearing and sediment removal adjacent to and in anadromous coho streams.	Potential Lead: Sonoma and Mendocino County Public Works, Water Agencies, Flood Control Districts Others: CDFG, NOAA Fisheries	Interim/ Continual	RR-HU-14
D	RR-HU-31	Retain LWD within streams to the extent possible.	Potential Lead: Sonoma and Mendocino County Public Works, Water Agencies, Flood Control Districts Others: CDFG, NOAA Fisheries	Interim/ Continual	RR-HU-14b
C	RR-HU-32	Store and make available woody material removed from streams for stream enhancement projects benefiting coho salmon.	Potential Lead: Sonoma and Mendocino County Public Works, Water Agencies, Flood Control Districts Others: CDFG, NOAA Fisheries	Interim/ Continual	RR-HU-14c
C	RR-HU-33	Promote alternatives to conventional bank stabilization for public and private projects, including bioengineering techniques.	Potential Lead: Sonoma and Mendocino County Planning and Public Works Departments Others: Landowners, CDFG, NCRWQCB, RCDs	Interim/ Continual	RR-HU-15
E	RR-HU-34	Review development set-backs for adequacy in protecting key streams inhabited by coho salmon.	Potential Lead: Sonoma and Mendocino Counties, Incorporated Areas Others: CDFG, NOAA Fisheries, Landowners, NCRWQCB	Interim	RR-HU-16
E	RR-HU-35	If appropriate, revise development set-backs to adequately protect key streams inhabited by coho salmon.	Potential Lead: Sonoma and Mendocino Counties, Incorporated Areas Others: CDFG, NOAA Fisheries, Landowners, NCRWQCB	Interim	RR-HU-16b
E	RR-HU-36	Promote streamside conservation measures, including conservation easements, setbacks, and riparian buffers.	Potential Lead: Sonoma and Mendocino Counties, Incorporated Areas Others: CDFG, NOAA Fisheries, Landowners, NCRWQCB	Interim/ Continual	RR-HU-16c
D	RR-HU-37	Implement streamside conservation measures, including conservation easements, setbacks, and riparian buffers.	Potential Lead: Landowners, Sonoma and Mendocino Counties, Incorporated Areas Others: CDFG, NOAA Fisheries, NCRWQCB	Interim/ Continual	RR-HU-16d

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
RUSSIAN RIVER HU (continued)						
E	RR-HU-38	Inventory, evaluate, and prioritize problem roads which contribute sediment to streams inhabited by coho salmon.	Potential Lead: Sonoma and Mendocino County Public Works Departments, Caltrans, Open Space Districts Others: CDFG, NCRWQB, Landowners, RCDs, NOAA Fisheries	Potential Lead: Counties, Caltrans Others: CDFG, NCRWQB, Landowners, RCDs, NOAA Fisheries	Interim	RR-HU-17
D	RR-HU-39	Fix problem roads which contribute sediment to streams inhabited by coho salmon.	Potential Lead: SWRCB, CDFG, NCRWQCB Others: Counties, Landowners, RCDs	Potential Lead: SWRCB, CDFG, NCRWQCB Others: Counties, Landowners, RCDs	Long-term	RR-HU-17b
E	RR-HU-40	Support efforts and develop county, city, and other local programs to protect and increase instream flows for coho salmon.	Potential Lead: Sonoma and Mendocino Counties, RCDs, Landowners Others: SWRCB, CDFG, NCRWQCB	Potential Lead: Sonoma and Mendocino Counties, RCDs, Landowners Others: SWRCB, CDFG, NCRWQCB	Interim	RR-HU-18
D	RR-HU-41	Develop and implement programs to protect and increase instream flows for coho salmon.	Potential Lead: Sonoma and Mendocino Counties, RCDs, Landowners Others: SWRCB, CDFG, NCRWQCB	Potential Lead: Sonoma and Mendocino Counties, RCDs, Landowners Others: SWRCB, CDFG, NCRWQCB	Long-term	RR-HU-18b
C	RR-HU-42	Participate in regional water management planning through the general plan process and in other venues as appropriate.	Potential Lead: Sonoma and Mendocino Counties, SWRCB, NCRWQCB	Potential Lead: Sonoma and Mendocino Counties, SWRCB, NCRWQCB	Interim	RR-HU-18c
Russian River Mainstem (various HSAs)						
E	RR-MS-01	Manage summer flows in the mainstem Russian River to benefit rearing coho salmon and the estuary while ensuring that all existing legal water uses and rights are accounted for.	Potential Lead: Sonoma County Water Agency (SCWA), USACE, NOAA Fisheries, SWRCB Others: CDFG, Landowners, Sonoma County	Potential Lead: Sonoma County Water Agency (SCWA), USACE, NOAA Fisheries, CDFG Others: Academia, Landowners, Sonoma County, SWRCB	Interim/Continual	RR-MS-01
E	RR-MS-02	Evaluate operating the estuary as a natural system to benefit coho salmon rearing and migration.	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG Others: CDFG, Landowners, Counties, SWRCB	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG Others: CDFG, Landowners, Counties, SWRCB	Interim	RR-MS-02
C	RR-MS-03	If appropriate, operate the estuary as a natural system to benefit coho salmon rearing and migration.	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG, Landowners, Counties, SWRCB	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG, Landowners, Counties, SWRCB	Long-term/Continual	RR-MS-02b
D	RR-MS-04	Evaluate adjusting the operation of Mirabel Dam, within existing water rights and legal uses, to improve passage of downstream migrants.	Potential Lead: SCWA, SWRCB Others: CDFG, NOAA Fisheries	Potential Lead: SCWA, SWRCB Others: CDFG, NOAA Fisheries	Interim	RR-MS-03
C	RR-MS-05	If appropriate, adjust the operation of Mirabel Dam, within existing water rights and legal uses, to improve passage of downstream coho salmon migrants.	Potential Lead: SCWA, SWRCB Others: CDFG, NOAA Fisheries	Potential Lead: SCWA, SWRCB Others: CDFG, NOAA Fisheries	Long-term	RR-MS-03b
E	RR-MS-06	Evaluate the feasibility of bypassing large dams.	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG Others: Landowners, Counties, Watershed Groups	Potential Lead: SCWA, USACE, NOAA Fisheries, CDFG Others: Landowners, Counties, Watershed Groups	Interim	RR-MS-04

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER	
Russian River Mainstem (various HSAs) (continued)						
C	RR-MS-07	If feasible, bypass large dams.	Potential Lead: SCWA, USACE, Counties, Watershed Groups Others: CDFG, Landowners, Counties, NOAA Fisheries	Long-term	RR-MS-04b	
E	RR-MS-08	Update temperature analyses below Coyote Dam and Warm Springs Dam and review dam management.	Potential Lead: SCWA, USACE, NOAA Fisheries Others: CDFG, Landowners, Counties	Interim	RR-MS-05	
C	RR-MS-09	If appropriate, revise management of Coyote and Warm Springs dams to benefit coho salmon recovery.	Potential Lead: SCWA, USACE, NOAA Fisheries Others: CDFG, Landowners, Counties	Long-term	RR-MS-05b	
E	RR-MS-10	In upper mainstem, prioritize and plan coho salmon habitat restoration programs and projects.	Potential Lead: CDFG, SCWA, Mendocino County, NOAA Fisheries Others: Landowners, USACE, RCDs	Interim	RR-MS-06	
C	RR-MS-11	Implement high-priority coho salmon habitat restoration programs and projects.	Potential Lead: CDFG, SCWA, Mendocino County, NOAA Fisheries, Landowners Others: USACE, RCDs	Long-term	RR-MS-06b	
Guerneville HSA						
5	C	RR-GU-01	Encourage local agencies to implement recommendations of completed non-point source sediment assessments.	Potential Lead: EPA, SWRCB, RWQCB, NOAA Fisheries, CDFG	Interim	RR-GU-01
5	C	RR-GU-02	Implement recommendations of completed non-point source sediment assessments.	Potential Lead: Sonoma County Others: EPA, SWRCB, NCRWQCB, NOAA Fisheries, CDFG	Interim/Continual	RR-GU-01a
5	E	RR-GU-03	Assess and prioritize sources of excess sediment.	Potential Lead: CDFG, RCDs, NCRWQCB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Interim	RR-GU-02
5	C	RR-GU-04	Treat priority sources of excess sediment.	Potential Lead: Landowners, Sonoma County, RCDs, NCRWQCB Others: CDFG, USFWS, NOAA Fisheries	Long-term	RR-GU-02b
5	C	RR-GU-05	Stock Willow, Sheephause, Freezeout, Dutchbill and Green Valley creeks as part of the coho salmon broodstock program.	Potential Lead: CDFG, NOAA Fisheries Others: SCWA, Landowners, Sonoma County	Interim	RR-GU-03
5	C	RR-GU-06	From willing Landowners, acquire conservation easements or fee-title of habitat essential for coho salmon.	Potential Lead: WCB, CDFG, NOAA Fisheries, Others: RCDs, Landowners, Sonoma County	Interim/Continual	RR-GU-04
5	E	RR-GU-07	Identify water diverters.	Potential Lead: SWRCB, NCRWQCB Others: Sonoma County, RCDs, Landowners	Interim	RR-GU-06
5	E	RR-GU-08	Request that the SWRCB review and/or modify water use based on the needs of coho salmon and authorized diverters.	Potential Lead: SWRCB, NCRWQCB Others: RCDs, Landowners	Interim	RR-GU-06b

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Guerneville HSA (continued)						
5	E	RR-GU-09	Monitor, identify problems, and prioritize needs for changes to water diversion on current or potential coho streams that go dry in some years, in particular Green Valley and Dutchbill creeks.	Potential Lead: SWRCB, NCRW/QCB, CDFG, NOAA Fisheries, Others: Sonoma County, RCDs, Landowners	Interim	RR-GU-06c
5	C	RR-GU-10	Remedy priority water diversion problems for current or potential coho streams that go dry in some years.	Potential Lead: SWRCB, NCRW/QCB, CDFG, NOAA Fisheries Others: Sonoma County, RCDs, Landowners	Long-term	RR-GU-06d
Austin Creek HSA						
3	C	RR-AC-01	Encourage local agencies to implement recommendations of completed non-point source sediment assessments.	Potential Lead: EPA, SWRCB, RWQCB, NOAA Fisheries, CDFG	Interim	RR-AC-01
3	C	RR-AC-02	Implement recommendations of completed non-point source sediment assessments.	Potential Lead: Sonoma County Others: EPA, SWRCB, NCRW/QCB, NOAA Fisheries, CDFG	Interim/Continual	RR-AC-01a
3	E	RR-AC-03	Assess and prioritize sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB	Interim	RR-AC-02
3	E	RR-AC-04	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Long-term	RR-AC-02a
3	E	RR-AC-05	Stock high-priority barren streams, including Ward Creek, with the coho salmon broodstock program.	Potential Lead: CDFG, NOAA Fisheries Others: SCWA, Landowners, Sonoma County	Long-term	RR-AC-03
Warm Springs HSA						
3	E	RR-WS-01	Develop plans to improve riparian vegetation in Dry Creek and its tributaries.	Potential Lead: CDFG, Sotoyome RCD Others: Landowners, SCWA, USACE	Interim	RR-WS-01
3	C	RR-WS-02	Implement riparian vegetation improvement plans.	Potential Lead: Landowners, SCWA, Sotoyome RCD Others: CDFG, USACE	Long-term/Continual	RR-WS-01b
3	C	RR-WS-03	Implement Sotoyome Resource Conservation District's Fish Friendly Farming Program.	Potential Lead: Landowners, SCWA, Sotoyome RCD Others: USACE	Interim/Continual	RR-WS-01c
3	C	RR-WS-04	Use land-use planning and conservation easements with willing landowners, to protect riparian vegetation.	Potential Lead: CDFG, Sotoyome RCD Others: Landowners, SCWA, USACE	Interim/Continual	RR-WS-01d
3	C	RR-WS-05	Support implementation of measures to modify flows in Dry Creek to provide summer rearing habitat for coho salmon.	Potential Lead: CDFG, NOAA Fisheries, SWRCB, NCRW/QCB	Interim	RR-WS-02

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Warm Springs HSA (continued)					
3 D	RR-WS-06	Modify flows in Dry Creek to provide summer rearing habitat for coho salmon.	Potential Lead: Mendocino and Sonoma Counties, SWRCB, NCRWQCB Others: CDFG, NOAA Fisheries, Landowners, RCDs	Long-term	RR-WS-02b
3 C	RR-WS-07	Stock high-priority barren streams, such as Mill and Felita creeks, as part of the coho salmon broodstock program.	Potential Lead: CDFG, NOAA Fisheries Others: SCWA, Landowners, Sonoma County	Long-term	RR-WS-03
3 C	RR-WS-08	Review and develop preferred protocols for Pierce's Disease Control that would maintain a native riparian corridor and develop an outreach program.	Potential Lead: RCDs, Counties Others: Landowners, CDFG, NCRWQCB, NOAA Fisheries, USFWS	Interim/ Continual	RR-WS-04
3 E	RR-WS-09	Assess, prioritize, and develop plans to treat sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Interim	RR-WS-06
3 C	RR-WS-10	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Long-term	RR-WS-06b
3 D	RR-WS-11	Increase habitat structure and complexity in Dry Creek to enhance habitat diversity, including depositional areas for spawning gravels for coho salmon (e.g., place LWD or large boulders).	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County	Interim	RR-WS-07
Mark West HSA					
4 C	RR-MW-01	Use land-use planning and conservation easements, from willing landowners, to reduce habitat fragmentation and improve riparian vegetation.	Potential Lead: Sonoma County Others: Landowners, CDFG, NOAA Fisheries, Watershed Groups	Interim/ Continual	RR-MW-01
4 E	RR-MW-02	Develop plans to improve instream coho salmon habitat conditions.	Potential Lead: CDFG, NOAA Fisheries Others: Landowners, Sotoyome RCD, Sonoma County	Long-term	RR-MW-02
4 D	RR-MW-03	Implement measures to improve instream coho salmon habitat conditions.	Potential Lead: CDFG, NOAA Fisheries Others: Landowners, Sotoyome RCD, Sonoma County	Long-term	RR-MW-02b
4 E	RR-MW-04	Assess, prioritize, and develop plans to treat sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Interim	RR-MW-04
4 C	RR-MW-05	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Long-term	RR-MW-04b

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Santa Rosa Creek HSA						
3	C	RR-SR-01	Encourage Sonoma County and the City of Santa Rosa to reduce habitat fragmentation and implement riparian improvements through land-use planning and use of conservation easements.	Potential Lead: CDFG, NOAA Fisheries	Interim	RR-SR-01
3	C	RR-SR-02	Use land-use planning and conservation easements, from willing landowners, to reduce habitat fragmentation and improve riparian vegetation.	Potential Lead: Santa Rosa Others: CDFG, NOAA Fisheries, Watershed Groups	Long-term/ Continual	RR-SR-01b
3	E	RR-SR-03	Evaluate, and develop solutions, to problems for coho salmon caused by channelization.	Potential Lead: SCWA, USACE, Sonoma County, UCCE Others: CDFG, NOAA Fisheries	Interim	RR-SR-02
3	D	RR-SR-04	Implement solutions to problems for coho salmon caused by channelization.	Potential Lead: SCWA, USACE, Sonoma County Others: CDFG, NOAA Fisheries, UCCE	Interim	RR-SR-02b
3	E	RR-SR-05	Assess, prioritize, and develop plans to treat sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Interim	RR-SR-03
3	C	RR-SR-06	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCDs, NCRWQB, Landowners, Sonoma County Others: CDFG, USFWS, NOAA Fisheries	Long-term	RR-SR-03b
Forsythe Creek HSA						
2	C	RR-FO-01	Restore riparian vegetation to improve migration and summer/overwintering habitat for coho salmon.	Potential Lead: CDFG, Mendocino RCD, NCRWQB Others: Landowners, Mendocino County, USFWS, NOAA Fisheries	Interim/ Continual	RR-FO-01
2	C	RR-FO-02	Control erosion to improve migration and summer/over-wintering habitat for coho salmon.	Potential Lead: CDFG, Mendocino RCD, NCRWQB Others: Landowners, Mendocino County, USFWS, NOAA Fisheries	Interim/ Continual	RR-FO-01b
2	E	RR-FO-03	Assess, prioritize, and develop plans to treat sources of excess sediment.	Potential Lead: CDFG, Mendocino RCD, NCRWQB Others: Landowners, Mendocino County, USFWS, NOAA Fisheries	Interim	RR-FO-02
2	D	RR-FO-04	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Mendocino RCD, NCRWQB Others: Landowners, Mendocino County, USFWS, NOAA Fisheries	Long-term	RR-FO-02b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Geyerville HSA						
3	C	RR-GE-01	Use land-use planning and conservation easements, from willing landowners, to maintain and improve riparian vegetation condition and water temperature.	Potential Lead: W/CD, CDFG, Sonoma County Others: NOAA Fisheries, Landowners, Watershed Groups	Interim/ Continual	RR-GE-01
3	E	RR-GE-02	Assess, prioritize, and develop plans to treat sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQCB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Interim	RR-GE-03
3	D	RR-GE-03	Treat high-priority sources of excess sediment.	Potential Lead: CDFG, Sotoyome RCD, NCRWQCB Others: Landowners, Sonoma County, USFWS, NOAA Fisheries	Long-term	RR-GE-03b
BODEGA/MARIN COASTAL HUS						
E	BM-HU-01	Implement BMPs for road projects maintaining environmentally sound upgrades, modifications, and new construction of road projects, including culverts and stream crossings.	Potential Lead: Counties, Caltrans Others: CDFG, NOAA Fisheries	Interim	BM-HU-01	
C	BM-HU-02	Support local agencies, Caltrans, and others in implementing and maintaining environmentally sound upgrades, modifications, and new construction of road projects, including culverts and stream crossings.	Potential Lead: CDFG, NOAA Fisheries Others: Counties, Caltrans	Interim	BM-HU-01b	
E	BM-HU-03	Continue to implement erosion control projects that were assessed and inventoried in sediment assessment plans.	Potential Lead: CDFG Others: Landowners, RCDs, Counties, NCRWQCB, NPS, DPR, CCC, USFWS, NOAA Fisheries	Interim/ Continual	BM-HU-02	
E	BM-HU-04	Avoid and/or minimize the adverse effects of water diversion on coho salmon by establishing: a more natural hydrograph, bypass flows, season of diversion, and off-stream storage.	Potential Lead: CDFG, SWRCB Others: Landowners, NOAA Fisheries, USFWS	Interim	BM-HU-03	
C	BM-HU-05	Work with local governments to incorporate protection of coho salmon in any flood management activities.	Potential Lead: CDFG Others: Counties	Interim	BM-HU-04	
C	BM-HU-06	Implement performance standards in Stormwater Management Plans.	Potential Lead: NCRWQCB, Counties	Long-term	BM-HU-05	
C	BM-HU-07	Address issues of low flow on private and public lands by increasing riparian protection, restoration, and sediment control, and employing BMPs for permeability and infiltration.	Potential Lead: Counties, NPS, DPR, RCDs Others: Landowners, CDFG, NCRWQCB	Long-term	BM-HU-06	
C	BM-HU-08	Continue outreach, education, and enforcement related to household hazardous waste and hazardous materials spills in creeks.	Potential Lead: NCRWQCB, Counties	Long-term	BM-HU-07	
C	BM-HU-09	Encourage the cultivation and availability of locally indigenous native plants for use in restoration and bank stabilization.	Potential Lead: CDFG, Counties Others: CCC, RCDs, Watershed Groups, NPS, DPR	Long-term	BM-HU-08	

HSA	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
BODEGA/MARIN COASTAL HUs (continued)						
	E	BM-HU-10	Investigate opportunities for restoring historic runs in identified water-sheds.	Potential Lead: CDFG, NOAA Fisheries	Interim	BM-HU-09
	E	BM-HU-11	Continue to support landowners and the Marin RCD to restore riparian zones and manage livestock to increase stream protection and soil retention.	Potential Lead: CDFG, County Others: Marin RCD, Landowners	Interim/ Ongoing	BM-HU-10
	E	BM-HU-12	Continue sustainable land management practices and control of sediment sources in agricultural zones.	Potential Lead: CDFG, County Others: Marin RCD, Landowners	Interim/ Ongoing	BM-HU-10a
	C	BM-HU-13	Continue to support the active watershed groups, encouraging a focus on coho salmon restoration where appropriate.	Potential Lead: CDFG, RCDs, Counties	Interim/ Ongoing	BM-HU-11
	E	BM-HU-14	Implement coho salmon passage improvements as identified in inventories conducted by the Salmon Protection and Watershed Network (SPAWN), Taylor and Associates, Trout Unlimited and the NPS. Expand inventories as needed for a comprehensive watershed approach for coho salmon passage.	Potential Lead: CDFG, NOAA Fisheries, Counties Others: NPS, DPR, Landowners, Caltrans, USFWS, NOAA Fisheries	Interim	BM-HU-12
	D	BM-HU-15	County planning, public works, open space, and fire departments should continue to implement FishNet 4C priority goals for this region.	Potential Lead: Counties Others: Landowners, Local Agencies, CDFG, NOAA Fisheries, USFWS	Interim/ Ongoing	BM-HU-13
	D	BM-HU-16	Enact and enforce the Marin County Streamside Conservation Area Ordinance.	Potential Lead: Counties Others: Landowners, Local Agencies, CDFG, NOAA Fisheries, USFWS	Long-Term/ Continual	BM-HU-13a
	D	BM-HU-17	Adopt and implement Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance (FishNet 4C 2004).	Potential Lead: Counties Others: Landowners, Local Agencies, CDFG, NOAA Fisheries, USFWS	Long-Term	BM-HU-13b
	E	BM-HU-18	Systematically work to restore coho salmon passage at county facilities.	Potential Lead: Counties Others: Landowners, Local Agencies, CDFG, NOAA Fisheries, USFWS	Interim	BM-HU-13c
	E	BM-HU-19	Address issues of sediment from roads through restoration and education.	Potential Lead: Counties, Caltrans Others: Landowners, Local Agencies, CDFG, NOAA Fisheries, USFWS	Interim	BM-HU-13d
	C	BM-HU-20	Monitor the effectiveness and maintenance of watershed restoration projects and augment inventories as needed.	Potential Lead: CDFG, Watershed Groups, RCDs, NPS, DPR Others: NOAA Fisheries, NCRWQCB, Landowners	Interim/ Continual	BM-HU-14
Salmon Creek HSA						
3	C	BM-SA-01	Coordinate efforts of involved agencies in review of plans for timber harvest and vineyard conversion.	Potential Lead: CDF, Sonoma County, NCRWQCB Others: CDFG, Landowners, Gold Ridge RCD	Interim	BM-SA-01

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Salmon Creek HSA (continued)					
3 C	BM-SA-02	Develop standards and BMPs for agriculture to reduce pathogen, nutrient, and sediment loadings to creeks.	Potential Lead: CDF, Sonoma County, NCRWQCB Others: CDFG, Landowners, Gold Ridge RCD	Interim	BM-SA-01b
3 C	BM-SA-03	Implement standards and BMPs for agriculture to reduce pathogen, nutrient, and sediment loadings to creeks.	Potential Lead: CDF, Sonoma County, NCRWQCB Others: CDFG, Landowners, Gold Ridge RCD	Interim/ Continual	BM-SA-01c
3 E	BM-SA-04	Monitor effectiveness and maintenance of past and current watershed restoration projects. Augment surveys as necessary.	Potential Lead: CDFG, Gold Ridge RCD Others: Landowners, Sonoma County, NCRWQCB, NOAA Fisheries, USFWS	Interim/ Continual	BM-SA-02
3 C	BM-SA-05	Continue to fund and support landowners to restore riparian zones and manage livestock to increase stream protection and soil retention. Encourage sustainable land management practices and control sediment sources in agricultural zones.	Potential Lead: CDFG, CDF, Sonoma County, NCRWQCB Others: Landowners, Gold Ridge RCD	Interim/ Continual	BM-SA-03
3 E	BM-SA-06	Implement recommendations of watershed or restoration plans within the range of coho salmon and implement actions consistent with priority recommendations of the coho salmon recovery strategy.	Potential Lead: CDFG, Gold Ridge RCD Others: Landowners, Sonoma County, NCRWQCB, NOAA Fisheries, USFWS	Interim	BM-SA-04
3 C	BM-SA-07	Design vineyard operations to ensure adequate protection of coho salmon habitat attributes, including riparian corridors, instream flow, and water quality.	Potential Lead: Sonoma County Others: CDFG, Gold Ridge RCD, Landowners, NCRWQCB, NOAA Fisheries, USFWS	Interim	BM-SA-05
3 C	BM-SA-08	Assess limiting factors on coho salmon in the Salmon Creek estuary.	Potential Lead: CDFG, NOAA Fisheries, DPR Others: Sonoma County, Academia	Interim	BM-SA-06
Walker Creek HSA					
2 C	BM-WA-01	Address water quality and nutrient loading issues by encouraging sustainable land management practices, controlling sediment sources, protecting riparian zones and employing BMPs that encourage permeability and infiltration.	Potential Lead: CDFG, NCRWQCB Others: Marin RCD, NOAA Fisheries, Landowners, Marin County	Interim	BM-WA-01
2 C	BM-WA-02	Assess the water temperature regime during the summer season for three to five years to determine the role of water temperature as a limiting factor in coho salmon production.	Potential Lead: Marin County, Marin RCD, NCRWCB Others: CDFG, Landowners, Watershed Groups, NOAA Fisheries	Interim	BM-WA-03
2 C	BM-WA-03	Support landowners and the Marin RCD in projects to improve channel conditions and restore natural channel geomorphology, including side channels and dense contiguous riparian vegetation.	Potential Lead: CDFG, NOAA Fisheries Others: Watershed Groups, Marin RCD, Landowners, NCRWQCB, Marin County	Interim/ Continual	BM-WA-04
2 C	BM-WA-04	Implement high priority coho salmon enhancement projects for the reduction of sediment delivery and the restoration of riparian corridors as listed in the Walker Creek Enhancement Plan (2001).	Potential Lead: CDFG, NCRWQCB Others: Watershed Groups, Marin RCD, NOAA Fisheries, Landowners, Marin County	Interim	BM-WA-05

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Walker Creek HSA (continued)						
2	C	BM-WA-05	Look for opportunities to increase LWD retention and recruitment.	Potential Lead: Marin RCD, Watershed Groups, CDFG Others: NOAA Fisheries, Landowners, NCRWQCB, Marin County/MMWD	Interim	BM-WA-07
2	C	BM-WA-06	Continue to assess the release of water from Soulejule Reservoir to develop the optimum release for coho salmon.	Potential Lead: CDFG, NOAA Fisheries, NCRWCB, Others: CDFG, Marin County/MMWD	Interim/ Ongoing	BM-WA-07
2	C	BM-WA-07	Support a coho salmon limiting factors assessment in Keys Estero and Tomales Bay.	Potential Lead: CDFG, NOAA Fisheries, Marin County/MMWD	Interim	BM-WA-08
Lagunitas Creek HSA						
5	E	BM-LA-01	Use recommendations of existing sediment source surveys to restore habitat of coho salmon.	Potential Lead: CDFG, NOAA Fisheries, Marin County/MMWD Others: NPS, DPR, Landowners, Marin RCD	Interim	BM-LA-01
5	E	BM-LA-02	Expand inventories as needed for a comprehensive watershed approach for coho salmon passage.	Potential Lead: CDFG, NOAA Fisheries, Marin County/MMWD Others: NPS, DPR, Landowners, Marin RCD	Interim	BM-LA-01a
5	D	BM-LA-03	Coordinate with appropriate agencies to restore coho salmon passage at barriers identified by Ross Taylor, SPAWN, and others.	Potential Lead: CDFG, NOAA Fisheries, Marin County/MMWD Others: Landowners, Marin RCD, SPAWN, NPS, DPR, Caltrans	Interim	BM-LA-03
5	D	BM-LA-04	Complete any needed surveys of migration barriers that were not identified by Ross Taylor, SPAWN, and others.	Potential Lead: CDFG, NOAA Fisheries, Marin County/MMWD Others: Landowners, Marin RCD, SPAWN, NPS, DPR, Caltrans	Interim	BM-LA-03b
5	C	BM-LA-05	Investigate opportunities for restoring historic runs of coho salmon.	Potential Lead: CDFG, NOAA Fisheries	Interim	BM-LA-04
5	C	BM-LA-06	Continue ongoing efforts and support of stewardship in the basin to include riparian enhancement and protection, sediment source reduction, habitat typ ing and surveying, coho salmon surveys and counts, water conservation, outreach and education, effectiveness monitoring of projects, and planning and assessment of potential restoration projects to benefit coho salmon.	Potential Lead: CDFG, SWRCB Others: MMWD	Interim	BM-LA-05
5	C	BM-LA-07	Provide incentives for septic inspection, repair, and replacement to reduce aquatic pollution.	Potential Lead: Marin County, NCRWQCB Others: Landowners, CDFG	Interim	BM-LA-06
5	C	BM-LA-08	Assess and evaluate habitat restoration actions in Nicasio Creek.	Potential Lead: CDFG, SWRCB, Marin County/MMWD Others: Landowners, Marin RCD	Interim	BM-LA-07
5	C	BM-LA-09	Implement habitat restoration actions in Nicasio Creek.	Potential Lead: CDFG, SWRCB, Marin County/MMWD Others: Landowners, Marin RCD	Interim	BM-LA-07a

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Lagunitas Creek HSA (continued)						
5	C	BM-LA-10	Develop a monitoring and assessment program for the estuarine reaches of Lagunitas Creek and inter-tidal reaches of Tomales Bay, looking at impacts to coho salmon rearing and emigration.	Potential Lead: CDFG, NOAA Fisheries Others: Landowners, NPS, DPR, Academia	Interim/ Continual	BM-LA-08
5	C	BM-LA-11	Restore Olema Marsh, Bear Valley Creek, and the mouth of Olema Creek, to benefit coho salmon. The restoration should provide rearing habitat refuge during high flows, habitat protection, and hydrologic connectivity between marshes.	Potential Lead: NPS, CDFG Others: Landowners, Marin RCD	Long-term	BM-LA-09
5	D	BM-LA-12	Work with private landowners to encourage biotechnical bank stabilization, riparian protections, woody debris retention, and timing of water withdrawals to help protect coho salmon.	Potential Lead: Marin RCD, Marin County, CDFG Others: Landowners, NPS, DPR	Long-term/ Continual	BM-LA-11
5	C	BM-LA-13	In the San Geronimo Creek sub-watershed, continue public outreach and education for private landowners, residents, commercial, public utility and county workers regarding best management practices to control erosion, protect riparian vegetation, retain LWD, and minimize disturbance to coho salmon from domestic animals.	Potential Lead: Marin RCD, Marin County, Watershed Groups Others: SPAWN, Landowners	Long-term	BM-LA-12
5	D	BM-LA-14	In the San Geronimo Creek sub-watershed, work with stock pond owners to remove non-native fish species where they are a threat to coho salmon.	Potential Lead: Watershed Groups, CDFG, Marin RCD	Long-term/ Continual	BM-LA-13
5	D	BM-LA-15	Marin County should develop a policy for reviewing the impacts of new development projects and how new well construction effects the streams. The County should consider adopting recommendations for well developments from the local coastal plan.	Potential Lead: Marin County Others: Landowners, CDFG, SWRCB	Interim	BM-LA-14
5	C	BM-LA-16	Recommend the NPS continue practices to benefit coho salmon, which include restoration projects, sediment control projects, locating fences out of riparian zones, repairing headcut gullies as possible, and implementing rotational grazing in locations to minimize erosion and impacts to the creek.	Potential Lead: NOAA Fisheries Others: CDFG, NPS	Interim/ Ongoing	BM-LA-15
5	C	BM-LA-17	Continue to implement and coordinate the the Watershed Protection Agreement Program for additional water hook-ups in Nicasio and San Geronimo creek watersheds.	Potential Lead: Marin MMWD, County Others: NOAA Fisheries, CDFG	Interim	BM-LA-16
5	C	BM-LA-18	Look for opportunities to restore natural channel form and function in the upper watershed to protect summer flows into San Geronimo Creek.	Potential Lead: Marin County, CDFG Others: Landowners, NPS, DPR, NOAA Fisheries, USFWS	Interim	BM-LA-17
5	C	BM-LA-19	Continue riparian protection and sediment control projects with a focus on working with landowners to manage livestock to protect riparian areas, and to implement erosion control projects on State and Federal park and private lands (e.g., Devil's Gulch).	Potential Lead: DPR, NPS Others: Landowners, CDFG, NOAA Fisheries	Interim/ Ongoing	BM-LA-18

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Lagunitas Creek HSA (continued)						
5	C	BM-LA-20	Continue public outreach and education for private landowners, residents, commercial, public utility and county workers regarding best management practices to control erosion, protect riparian vegetation, retain woody debris, and minimize disturbance to coho salmon from pets.	Potential Lead: CDFG, Watershed Groups Others: County	Interim/ Continual	BM-LA-21
5	C	BM-LA-21	Determine policy for reviewing new development projects and well construction. Consider adopting recommendations for well developments from the Coastal Plan.	Potential Lead: CDFG, County, Watershed Groups	Interim	BM-LA-23
Bolinas HSA						
5	E	BM-BO-01	Implement recommendations of completed sediment source surveys and supplement surveys as necessary.	Potential Lead: Marin County, CDFG, Marin RCD Others: NPS, DPR, Landowners, USFWS, NOAA Fisheries	Long-term	BM-BO-01
5	D	BM-BO-02	Continue restoration efforts on Bolinas and Big lagoons to benefit coho salmon during all life phases and seasons.	Potential Lead: NPS Others: CDFG, Marin County, Landowners, NOAA Fisheries, USFWS	Interim/ Ongoing	BM-BO-02
5	E	BM-BO-03	Work with landowners through outreach and education and appropriate agencies to manage summer flows for coho salmon, on a watershed basis. Provide support and incentives to protect both fisheries flows and agriculture by timing of withdrawals, construction of off-site storage facilities, water conservation practices, and riparian zone protections. Conduct outreach and education for landowners on these practices.	Potential Lead: SWRCB, CDFG, NOAA Fisheries Others: Watershed Groups	Interim	BM-BO-03
5	C	BM-BO-04	Look for opportunities to increase LWD recruitment and retention.	Potential Lead: CDFG	Long-term	BM-BO-04
5	C	BM-BO-05	Provide incentives for septic inspection, repair and replacement to improve water quality in both streams and lagoons.	Potential Lead: Marin County, NCRW/QCB	Long-term	BM-BO-05
5	C	BM-BO-06	Encourage the National Park Service to provide additional space for Stinson Beach Water District for off-stream storage to protect coho salmon in Eastroot Creek.	Potential Lead: NOAA Fisheries, Stinson Beach Water District Others: CDFG, SWRCB, Marin County, USFWS	Interim	BM-BO-06
5	D	BM-BO-07	Identify and prioritize coho salmon passage barriers in the Redwood Creek drainage.	Potential Lead: DPR, County Others: CDFG	Interim	BM-BO-07
5	D	BM-BO-08	Treat coho salmon passage barriers in the Redwood Creek drainage.	Potential Lead: DPR, County Others: CDFG	Interim	BM-BO-07b
5	C	BM-BO-09	Identify and prioritize problems related to roads and trails in these watershed sheds, including location of trails and access for construction and maintenance of roads and trails.	Potential Lead: NPS Others: DPR, CDFG, NOAA Fisheries, USFWS	Long-term	BM-BO-08
5	C	BM-BO-10	Treat problems related to roads and trails in these watersheds, including location of trails and access for construction and maintenance of roads and trails.	Potential Lead: NPS Others: DPR, CDFG, NOAA Fisheries, USFWS	Long-term	BM-BO-08b

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	DURATION	ORIGINAL IDENTIFIER
SAN FRANCISCO BAY AREA HU						
	C	SF-HU-01	Include coho salmon in habitat suitability evaluations in the San Francisco Bay Area.	Potential Lead: CDFG Others: Counties, Watershed Groups, NOAA Fisheries, Landowners	Long-term	SF-HU-01
	C	SF-HU-02	Where appropriate, apply range-wide recommendations to suitable streams in the San Francisco Bay.	Potential Lead: CDFG, Counties, NOAA Fisheries	Long-term	SF-HU-02
San Rafael HSA						
2	C	SF-SR-01	Work to restore coho salmon habitat, especially in Arroyo Corte Madera del Presidio and Corte Madera Creek.	Potential Lead: Marin County, Watershed Groups, CDFG Others: Landowners, NOAA Fisheries, USACE	Long-term	SF-SR-01
SAN MATEO HU						
	E	SM-HU-01	Reduce the effects of water diversions, by assisting the SWRCB's coordination with other agencies in addressing season of diversion, off-stream reservoirs, bypass flows protective of coho salmon and natural hydrograph.	Potential Lead: CDFG Others: SWRCB, Landowners, USFS, RWQCB, Watershed Groups	Interim	SM-HU-02
	D	SM-HU-02	Develop legislation that will fund county planning for environmentally sound growth and water supply. Work in coordination with the California Department of Housing and Community Development (CDHCD), Association of Bay Area Governments (ABAG), and other government associations.	Potential Lead: CDFG Others: Counties, CDHCD, ABAG, RWQCB, Landowners, Watershed Groups, NOAA Fisheries	Long-term	SM-HU-03
	C	SM-HU-03	Continue to protect riparian zones on streams inhabited by coho salmon within the coastal zone according to the local coastal plan and THP prescriptions.	Potential Lead: Counties Others: CDFG, CDF, Landowners, Watershed Groups, Caltrans, NOAA Fisheries, RWQCB	Interim	SM-HU-04
	C	SM-HU-04	Evaluate the need to apply coastal zone protections to streams inhabited by coho salmon that are not in the coastal zone.	Potential Lead: Counties Others: CDFG, CDF	Interim	SM-HU-04d
	C	SM-HU-05	Develop written standards for routine operations and maintenance.	Potential Lead: Counties Others: CDFG, CDF	Interim	SM-HU-04c
	C	SM-HU-06	Implement written standards for routine operations and maintenance, and train staff in best management practices.	Potential Lead: Counties Others: CDFG, CDF	Interim	SM-HU-04d
	D	SM-HU-07	Assess and prioritize coho salmon passage barriers to coho salmon habitat.	Potential Lead: Counties, CDFG	Interim	SM-HU-04e
	D	SM-HU-08	Restore coho salmon passage to coho salmon habitat by using the prioritized list.	Potential Lead: Counties, CDFG	Interim	SM-HU-04f
	D	SM-HU-09	Conduct road assessments and address issues of sedimentation from county public works and parks roads and trails.	Potential Lead: Counties, DPR Others: CDFG	Interim	SM-HU-04g
	C	SM-HU-10	Promote alternatives to conventional bank stabilization for public and private projects.	Potential Lead: Counties, CDFG Others: Landowners	Interim	SM-HU-04h

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
SAN MATEO HU (continued)						
C	SM-HU-11	Establish adequate spoils storage sites throughout the counties so that material from landslides and road maintenance can be stored safely away from streams inhabited by coho salmon. Coordinate these efforts with Caltrans.	Potential Lead: Caltrans, Counties Others: CDFG	Interim	SM-HU-04i	
C	SM-HU-12	Work to increase county enforcement of permit conditions and erosion control plans on development.	Potential Lead: Counties, CDFG Others: NOAA Fisheries	Interim	SM-HU-04j	
C	SM-HU-13	Support continued economically sustainable management of forest and agricultural lands in the range of coho salmon to reduce the potential for conversion to residential or commercial development.	Potential Lead: CDFG, Landowners Others: CDFG, BLM NPS, Watershed Groups	Interim	SM-HU-05	
San Gregorio Creek and Pescadero Creek: HSAs						
4	E	SM-SG-01	Minimize take attributable to diversion of stream flow through alternatives, such as the operation of off-stream reservoirs, development of infrastructure necessary for conjunctive use of stream flow, and use of desalinated ocean water.	Potential Lead: RWQCB Others: CDFG, Landowners, Watershed Groups, Counties	Interim	SM-SG-01
4	D	SM-SG-02	Conduct a watershed assessment in San Gregorio Creek that addresses impacts to coho salmon.	Potential Lead: CDFG Others: Watershed Groups, Landowners	Interim	SM-SG-02
4	E	SM-SG-03	Conduct a comprehensive assessment of watershed processes (e.g., hydrology, geology, fluvial geomorphology, water quality, and vegetation), instream habitat, and factors limiting coho salmon production.	Potential Lead: CDFG Others: Watershed Groups, Landowners	Interim	SM-SG-03
4	D	SM-SG-04	Use the assessment results to develop a plan for restoration of coho salmon passage, instream habitat, and upslope erosion control, for implementation by cooperating landowners/managers.	Potential Lead: CDFG Others: Watershed Groups, Landowners	Interim	SM-SG-03b
4	C	SM-SG-05	Implement BMPs designed to reduce erosion and sediment from roads into instream habitat (e.g., practices described in the California Salmonid Stream Habitat Restoration Manual).	Potential Lead: CDFG Others: CDFG, Caltrans, Watershed Groups	Interim	SM-SG-04
4	D	SM-SG-06	Improve riparian areas by implementing BMPs designed to reduce bank erosion, water temperature, and the removal of LWD. These BMPs should include livestock exclusion fencing, reclamation and reconstruction of flood plain, and active revegetation.	Potential Lead: CDFG Others: Cattlemen's Association, Farm Bureau, Landowners, Watershed Groups, RWQCB	Interim	SM-SG-05
4	E	SM-SG-07	Encourage funding authorities to allocate adequate resources to prioritize and upgrade culverts to provide fish passage within the range of coho salmon to pass 100-year flows and the expected debris loads (e.g. LWD that might be mobilized).	Potential Lead: Federal, State, Local, and Tribal Government; Ranching, Agricultural, Forestry, Fishing, and Conservation Stakeholders	Interim	SM-SG-06
4	E	SM-SG-08	Request that the SWRCB declare critical tributaries to San Gregorio and Pescadero creeks fully appropriated during summer and fall months.	Potential Lead: CDFG Others: SWRCB, RWQCB	Interim	SM-SG-07

HSA PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Año Nuevo (Gazos Creek) HSA					
5	D	SM-AN-01 Implement the projects recommended as a high priority for coho salmon in the Gazos Creek watershed restoration plan.	Potential Lead: CDFG, Watershed Groups, Counties	Interim	SM-AN-01
BIG BASIN HU					
E	BB-HU-01	Continue to operate MBSTP Kingfisher Flat Hatchery as a conservation hatchery, following the guidelines of the Department and NOAA Fisheries.	Potential Lead: CDFG, NOAA Fisheries Others: Watershed Groups, Counties, Landowners	Interim/ Ongoing	BB-HU-01
C	BB-HU-02	Provide education and training on water diversion practices to facilitate compliance.	Potential Lead: CDFG Others: Watershed Groups	Interim/ Continual	BB-HU-02
E	BB-HU-03	Assess and prioritize culverts to provide coho salmon passage within the range of coho salmon, and to pass expected high flow debris loads (e.g. mobilized LWD).	Potential Lead: County Others: CDFG	Interim	BB-HU-03
D	BB-HU-04	Allocate adequate resources to prioritize and upgrade culverts providing coho salmon passage within the range of coho salmon and to pass expected high flow debris loads (e.g. mobilized LWD).	Potential Lead: County, CDFG Others: NOAA Fisheries	Interim	BB-HU-03b
E	BB-HU-05	Develop and apply bypass stream flow requirements on all existing and future structures in streams inhabited by coho salmon.	Potential Lead: CDFG Others: SWQCB, Landowners, CDF, Caltrans, Watershed Groups	Interim/ Continual	BB-HU-04
D	BB-HU-06	Implement the highest priority restoration projects in the watershed plans that address coho salmon habitat. Adjust on-going efforts based on results.	Potential Lead: CDFG, Watershed Groups, Counties, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim/ Continual	BB-HU-05
D	BB-HU-07	Complete a broad conjunctive use feasibility study focusing on creative ways of managing existing surface and groundwater resources in Santa Cruz County, with the intent to increase base flow at critical times.	Potential Lead: CDFG, SWQCB Others: Water Districts, Counties, Landowners, Watershed Groups	Interim	BB-HU-06
C	BB-HU-08	Develop a lagoon management plan that addresses the needs of coho salmon.	Potential Lead: NOAA Fisheries, SWQCB, Academia, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim	BB-HU-07
C	BB-HU-09	Implement the lagoon management plan that addresses the needs of coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, RWQCB, Academia, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim	BB-HU-07b
Davenport HSA					
5	E	BB-DA-01 Work with the SWRCB to develop and enforce stream flow bypass requirements for diversions in Waddell Creek, mainstem Scott Creek, Big Creek, Mill Creek, and San Vicente Creek.	Potential Lead: CDFG, SWRCB Others: Watershed Groups, Landowners	Interim/ Long-term	BB-DA-01

HSA	PRIORITY LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
Davenport HSA (continued)						
5	E	BB-DA-02	Petition the SWRCB to declare Scott Creek and San Vicente Creek fully appropriated during summer and fall months.	Potential Lead: CDFG Others: SWRCB	Interim	BB-DA-02
5	D	BB-DA-03	Improve riparian vegetation by implementing established BMPs designed to reduce bank erosion, temperature, and removal of LWD; also include livestock fencing where needed, reclamation or reconstruction of flood plains, and active revegetation (this recommendation applies especially to Scott Creek).	Potential Lead: CDFG Others: Cattlemen, Farm Bureau, Landowners, Watershed Groups, Counties, RWQCB, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim/ Continual	BB-DA-03
5	C	BB-DA-04	Reduce sediment from road erosion using established BMPs (this recommendation applies especially to Scott Creek).	Potential Lead: Counties, Caltrans Others: CDFG, Watershed Groups, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim/ Continual	BB-DA-04
5	C	BB-DA-05	Investigate suspect log jams in Waddell Creek to determine if passage issues for coho salmon exist and should be modified if absolutely necessary.	Potential Lead: CDFG, DPR Others: Watershed Groups, CCC, Counties, Landowners	Interim	BB-DA-05b
5	D	BB-DA-06	Develop a log-jam management plan.	Potential Lead: DPR	Interim	BB-DA-05b
5	D	BB-DA-07	Develop stream flow bypass requirements for diversions on the mainstem San Vicente and Mill creeks.	Potential Lead: CDFG, SWQCB Others: Watershed Groups	Interim	BB-DA-07
5	D	BB-DA-08	Implement stream flow bypass requirements for diversions on the mainstem San Vicente and Mill creeks.	Potential Lead: CDFG, SWQCB Others: Watershed Groups	Interim	BB-DA-07b
5	D	BB-DA-09	Enforce stream flow bypass requirements for diversions on the mainstem San Vicente and Mill creeks.	Potential Lead: SWQCB, CDFG Others: Landowners	Interim	BB-DA-07c
San Lorenzo River HSA						
3	C	BB-SL-01	Reduce sediment from road erosion using established BMPs accounting for public safety standards; this applies especially to San Lorenzo River.	Potential Lead: Counties, Caltrans Others: CDFG, Watershed Groups, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim	BB-SL-01
3	E	BB-SL-02	Develop and enforce stream flow bypass requirements for diversions in the San Lorenzo River and its tributaries Zayante, Fall, Bear, Boulder, and Branciforte creeks.	Potential Lead: CDFG, SWRCB Others: Watershed Groups, Landowners	Interim	BB-SL-02
3	D	BB-SL-03	Evaluate the Felton Diversion Dam for impacts to coho salmon.	Potential Lead: CDFG, NOAA Fisheries Others: Watershed Groups	Interim	BB-SL-03
3	C	BB-SL-04	Improve adult coho salmon passage at locations named in the San Lorenzo River Enhancement Plan, the Santa Cruz Road Crossing and Salmonid Passage Assessment (Taylor 2003) and those identified by the Department as being problematic.	Potential Lead: CDFG, Counties, FishNet 4C, Watershed Groups, Landowners, Caltrans	Interim	BB-SL-04

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
San Lorenzo River HSA (continued)						
3	C	BB-SL-05	Implement the portions of the San Lorenzo River Enhancement Plan, and the areas identified as problematic by the Department that are consistent with the coho salmon recovery strategy.	Potential Lead: CDFG, Counties, FishNet 4C, Watershed Groups, Landowners, Caltrans	Interim	BB-SL-04b
Aptos-Soquel HSA						
3	E	BB-AP-01	Implement elements of the Soquel Creek Watershed Assessment and Enhancement Project Plan that are consistent with the coho salmon recovery strategy. Specifically focusing on preservation of base flow, restoration of flood plains, improvements to coho salmon passage, BMPs to reduce sedimentation of instream habitat.	Potential Lead: Counties, Landowners, Santa Cruz County RCD, Coastal Conservancy Others: CDFG, FishNet 4C, Watershed Groups, Caltrans,	Interim/ Continual	BB-AP-01
3	E	BB-AP-02	Maintain year round instream flows for coho salmon by amendments to the adjudication, water conservation, shallow recharge opportunities, shallow-well gauging, deep-well gauging, stream-gauging, self-monitoring of diversions, and conjunctive water management for recovery of groundwater levels.	Potential Lead: CDFG Others: SWQCB, Watershed Groups, Santa Cruz County Resource Conservation District, Coastal Conservancy	Interim/ Continual	BB-AP-02